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ABSTRACT

The critical relationship between students and their programs of study that affects student retention is examined. Current views of retention are reviewed, and the nature of retention studies that have been conducted during the last decade is analyzed. It is suggested that studies of persistence be conducted with the following possibilities in mind: the individual is in an inappropriate program in part perhaps because the institution does not provide adequate assistance in or opportunity for program selection; or the program is unattractive, ineffective, or overspecialized for many prospective students. Attention is directed to initial major or program selection, changing majors, options available to a student in initial program selection or in making a program change, and the case of transfer students. A method of analyzing major or program changes at the levels of department or program, division or college, and institution is illustrated. The persistence data at Michigan State University and a second unidentified university are examined as illustration. Issues to be included in the study of persistence include: the group of students to be considered, the focus of the study (e.g., degree attainment or other educational goals); and the types of action that may be taken as the result of findings. Factors involved in student persistence include interests of students in programs, the nature and amount of work required by a program, faculty-student rapport, and the size of the program. Recommendations for increasing persistence are included. Appended materials include questions about retention studies, information from the University of Illinois Handbook, and a bibliography. (SW)

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Student Persistence and Benefits: Program Selection and Degree Completion

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Preface

Some twenty years ago the senior author was involved in a summer workshop for liberal arts college administrators and faculty members involved in rethinking of their institutional undergraduate programs. The workshop was held on the campus of an Eastern women's college widely known for its unique approaches to undergraduate education for women. Many faculty members and administrators from Midwestern and Western colleges found themselves vaguely irritated and sometimes exasperated by discussions of the host institution's program which, in content, objectives, and approach, differed markedly from most of the institutions represented. For example, a question about the extent to which large classes or lectures were used in the institution resulted in a reply from the dean that there had been some experimentation with classes of 10 to 15 but the conclusion was that no significant education could take place in such large groups. Despite the emphasis on individualization, there was little data on persistence of students to the attainment of a degree.

One of the visiting deans, in quizzing a very attractive and intelligent student from the host college who was waiting table during the workshop, suggested to the young woman that she transfer to his institution the coming year, adding that his institution needed good students. The immediate and unanswerable reply was, "Why should a good student go to an institution that needs good students?" The remarks both of the host dean and the host institution student are directly and immediately relevant to this study of student retention or, as we prefer to call it, student persistence. The unavailability of persistence data on students in this innovative college reflected, on one hand, a conviction of the worth of the program that made study of it unnecessary and, on the other, such a deep sense of satisfaction in the process of interaction of faculty and students that the faculty was disinclined to look beyond the immediate experience to ascertain the results. Thus was reflected what is still the norm in most American colleges and universities: so long as the student population is adequate to maintain the institution, retention is of no concern. When attention is directed to student retention or persistence, institutions seldom address the implications of the question so succinctly phrased by the student in response to the dean's invitation.

Why should a student either go to or remain in a particular college?

Both the extensive review of previous literature on student retention and our survey of institutions to obtain information on their concerns and information about retention led us to the conviction that institutions have become concerned about student retention only when static or falling enrollment has posed a fiscal problem for the institution. Although those few retention studies that have focused on the major or department indicate that most students leave an institution because of their dissatisfaction or uncertainty about their choice of academic program, progress in that program, or indefinite career plans, the actual recommendations and actions evolving out of institutional-level retention studies have tended to be directed toward the peripheral areas of student activities, residence halls, food service, and others. Furthermore, these studies, based largely on correlations from which are inferred highly dubious causal connections, have not (in any case that we have been able to find) been substantiated by evidence that recommendations based on these peripheral matters have any significant impact on student retention.

There are a number of reasons for this failure to view student persistence in reference to the benefits that accrue to students. One is the ready assumption on the part of academic administrators and faculty that a longer period of time in college is better than a short period whether or not a degree is achieved. A second assumption is that a bachelor's degree in some uncertain way assures the individual and those who deal with him of tangible and useful educational accomplishment. This being true, any individual who fails to pursue the degree is obviously deficient in understanding. A third factor is that it is only when institutional survival or faculty employment is endangered that persistence becomes an issue, and the desire to move quickly tends to force an institution to deal with those matters that can be readily changed without great resistance and with minimal time involvement.

Even when an institution becomes concerned about student persistence it may lack a data system which will support a retention study conducted by major or program and various types and sources of students. It is not that the data system must be so elaborate that it is too expensive to maintain, but rather that data systems have simply not been developed to facilitate studies of student progress and success in regard to the various programs offered in an institution. For many years, researchers have pointed out the usefulness of studying the student credit hour patterns of the various majors and colleges in reference to an induced course load matrix. The patterns of major changes by students is surely no more difficult and potentially of far greater value in assessment of program worth.

Finally, we became convinced, from the responses to our survey, that many administrators and researchers either feel that it is impolitic or are simply unwilling to place responsibility on departments and program personnel for developing meaningful and attractive programs that offer tangible benefits and encourage students to persist. The results of studies of persistence conducted with this obligation in mind may be surprising in suggesting actions that will be strongly resisted by both faculty members and students. For example, we found one major launched with considerable fanfare a few years ago in which no one had as yet been graduated. Is the major unneeded, of poor quality, or overly difficult?

Accordingly, this volume emphasizes a new look at student persistence taking into account, on one hand, the increasing tendency of individuals to pursue programs on a part-time basis or over a span of years rather than on a continuous four-year basis; and, on the other hand, the belief that the major reason for attending college is to achieve educational benefits that improve the quality of the individual's life and that of society as well while simultaneously providing values and abilities that permit an individual to earn a living and contribute significantly to society. A college, like any other community, city, or state, generates a wide range of activities that are incidental or peripheral to the main functions for which these governmental units exist. A city is not regarded as effective because of its extensive program offerings in the arts, although this can certainly be an added benefit when other functions are adequately met. Similarly, we believe that on a college campus the primary raison d'etre of a college should be in the attractiveness and quality of the educational programs provided for its students, and the responsibility for this rests directly on the faculty units that developed and offer courses and programs. We believe that the college that does not study and know in detail the extent to which students do or do not persist in its programs knows very little about what is going on and nothing at all about the quality of the programs offered. For these reasons, study of student persistence must be an ongoing affair with any variations over time being continually related back to institutional and program characteristics. In brief, we conclude that an institution should be concerned about student persistence, not to ensure its own survival, but to ensure that those who enroll in the institution are provided with adequate opportunities to acquire and know that they are acquiring significant social, personal, and vocational benefits.

The list of those individuals and institutions to which we are indebted for contribution of materials and ideas to this study is much too lengthy to list. We are especially indebted to the Exxon Education Foundation for the original grant which made this study possible and for the continuing interest in the study during its progress. Dr. Jane Loeb, Associate Vice Chancellor at the University of Illinois, read the entire study in its next to final draft and commented in helpful ways. Dr. Larry Jones, of the University of Georgia, also read this semi-final draft and provided helpful reactions. Miss Ruth Frye, long-time assistant to the senior author, earns special thanks for the time, efforts, and depth of interest involved in preparing numerous drafts of this book and particularly for the onerous work of preparing and checking the various tables and commentaries on them.

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Chapter One

Views About Retention

Student retention is a continuing concern of colleges and universities but that concern, to a significant extent, waxes and wanes or is variously interpreted depending upon social, psychological, and economic factors and current philosophical commitments. Unfortunately, when total enrollments are stable or increasing and finances adequate, the problem of retention may be largely ignored. In fact, this attitude is so prevalent that the issue of retention is commonly regarded solely as a possible remedy for an institutional ailment characterized by decreasing enrollments. We view this perception as being exceedingly narrow in that it views student retention as but a budgetary matter; we contend that student persistence is an issue that reaches far beyond its effects upon financial matters, being rooted in the philosophical underpinnings of the institution and the degree to which those tenets are reflected in practice. The phenomenon labeled "retention" that one attempts to treat as a well-defined entity is really a concatenation of many influences that are pandemic to a university or college. It is our feeling that perhaps the most important and most overlooked relationship that is bound up under the rubric of "retention" or "persistence" is the critical relationship between students and their programs of study. The major theme of this book is to explain why this is so and to demonstrate what insights can be unveiled to one who goes beyond the measure of retention at an institutional level and looks instead at such measures applied to colleges, departments, or programs. Before engaging with this central issue, however, it may be instructive to set the scene by first examining the current views of retention and, in the next chapter, by inquiring into the nature of the many retention studies that have been conducted during the last decade.

In contrast to the prevalent perception that low retention is symptomatic of an institutional shortcoming that should be corrected, there is a less common, contravening viewpoint that sees a low retention rate as evidence of tough programs or high standards. We have heard presidents or deans in opening convocations suggest to incoming freshmen that each view the individual on either side and reflect on the fact that only one of the trio will be graduated. One of the authors knows of a liberal arts college that has long touted a 25 percent graduation rate of its freshmen as evidence of program quality (although, in fact, it is more nearly 45 to 50 percent, as he has personally verified by examining the raw data).

When enrollments are decreasing and budgets are stringent, retention to a degree becomes a desirable institutional goal to be achieved for almost every student. The assumption is readily made that a college degree is both desirable and possible for almost everyone. In this context, the task is seen, as the title of Astin's (1975b) book has it, as Preventing Students from Dropping Out. Apparently the attitude of institutions of higher education toward retention is variable over time and circumstance. It is also mixed within the institution itself. Administrators are very likely to view enrollment (and therefore retention as a means of maintaining or increasing enrollment) in relation to the budget. Since class sizes are always subject to increase, state-assisted colleges and universities may even see an increase in enrollment (as well as an increase in tuition and fees) as a means of counterbalancing decreased appropriations. This tempting line of thought can be supported by the lack of any substantial evidence that class size is related to quality and the self-evident fact that quality is non-existent if an institution does not survive. Researchers on retention, in addition to the natural desire to apply research methodology to a current problem, are motivated by the availability of financial support for study of it. Counselors are much more likely to view retention as the concern or problem of an individual and recognize that neither administrative concerns nor general research findings have much to do with the decision reached by an individual as to the wisdom of withdrawing from college. These varying preconceptions lead to extensive and often confused statements about retention. The recent interest in retention in institutions of higher education is indicated by the size of the bibliography initially collected in the process of preparing this report. A total of 924 items (books, articles, book chapters, and so forth) were found to have some relevance. Many others (number unknown) were rejected as inconsequential. Of the 924, 628 had publication dates of 1970 or later.

Retention is a concept that has much broader implications and applications than those that pertain to its use in higher education. Churches, professional and fraternal groups or organizations, and other special interest groups depend for their survival on retention of members as well as on a flow of new members replacing inevitable attrition. The continued existence of magazines and newspapers depends upon maintaining an adequate list of subscribers. In all of these circumstances, there is a continuing interaction or negotiation between those who dominate, direct, or lead an enterprise and those who support it by membership fees, dues, gifts, or time commitments. Highly prestigious honorific organizations with limited membership, as exemplified by the Order of the Garter or Phi Beta Kappa, have no difficulty in finding members or retaining them. Most organizations must engage in continual recruitment and in activities designed to retain those recruited. Those institutions that ineptly or incorrectly publicize their purposes and programs engender serious retention problems. Those that narrowly and rigidly define their purposes and programs are likely to find a limited and declining interest in what they provide. There is reason to view most organizations, including colleges, as engaged in a marketing enterprise.

Prisons or penitentiaries and state hospitals are an exception, but these institutions still have much in common with colleges and universities. Indeed, in the developmental stages of most states, communities vied with each other to obtain a state-supported institution, whether penal or educational. The preference was not necessarily for the state college or university since it would import its faculty rather than employ local people; also, its students, less controlled than penitentiary inmates, could be disturbing elements in the community.

Penitentiaries (literally places for penitents) have historical connotations of detention, discipline, punishment, and reformation. Reformation has implications of education, and detention can then be viewed as retention until penitence and reformation through education have become effected. The term to be served can be viewed as adjustable with reductions permitted for good behavior (accepted as evidence of penitence or proper motivation and reformation) or to reduce overcrowding. Voluntary withdrawals, escapes, or dropouts are recognized as indicative of some weakness in the institution, and these dropouts are sought for return with somewhat greater energy than is apparent in most colleges. Voluntary return to the penitentiary is not common but return (recidivism) is all too common and provides tangible evidence of the ineffectiveness of the education provided. "Lifelong education" was provided in our penitentiaries long before colleges proposed the idea. It is interesting to reflect upon the thought that, in promoting lifelong education, colleges have not recognized that recurrent or lifelong return to colleges could, like recidivism, be regarded as evidence of the ineffectiveness of education; one has only to agree that the central purpose of a college education should be to develop an individual capable of continuing self-education to arrive at that view. This objective of continuing self-education poses a difficult task and one that is accomplished with a minority of even those students who are retained to the point of graduation.

Retention is indeed a widespread concern and, as with any concept of concern, a wide range of terms has come into use. Educational institutions have been especially productive in this regard.

Terminology

The extensive terminology that has grown up over time in discussion of student retention and persistence is in itself revelatory of some assumptions and philosophical commitments. Perhaps the term dropout (and its associated overtones) is itself indicative of the negative attitudes frequently directed toward students who interrupt their education. The voluntary withdrawal or dropout is, by some academics, regarded with only slightly less dissatisfaction or disgust than is the individual who is officially withdrawn, dropped, or expelled for lack of motivation, inability, or unacceptable behavior. The terms "pushout" and "kickout" have been used informally for those officially ejected, but presumably the undesirable implications of these terms have deterred widespread usage. Even the less pejorative term "withdrawal" has certain psychological associations suggesting deficiencies on the part of individuals who withdraw. The term stopout is one of more recent development recognizing that, for many individuals, continuous enrollment from entrance to the acquiring of a degree no longer has great significance. Indeed, for some sporadic or recurrent enrollees, the term dropin might be appropriate. While some institutions still hold strongly to the idea of a class (freshman, sophomore, junior, senior) and the integrity of that class in pursuing and acquiring a degree, in many institutions today the acceleration of some students by heavy loads, summer school attendance, and examination credit, coupled with the stopout of some students and part-time enrollment of others, has deprived the class designation of any significance other than its association with the accumulation of a certain number of credits and possibly, in some cases, with certain perquisites in regard to driving, parking, stack access in the library, and other such matters. Such special privileges are increasingly hard to maintain in an era where individual needs or minority group status are given attention. The fact remains that the granting of special privileges to any class makes all others second class.

In contrast with dropout, withdrawal, interruption, and stopout, all of which are individually initiated actions taken because of illness, finance, personal problems, or discouragement with educational experiences or grades, the terms attrition and wastage are oriented to the institutional viewpoint. These terms imply a production process with an expectation that there will be some loss between the collection, delivery, and processing of raw materials and the final product. Whereas attrition might be regarded as a natural, inevitable, and even desirable erosion (a rather common view in some institutions), wastage (a term used commonly in Britain) implies ineffective and inefficient use of talent. What is lacking in this group of terms is the recognition that a dropout or withdrawal may be encouraged by the existence of a more attractive alternative. In a sense, for example, study abroad (which in some cases is little more than travel or a short-term residence in a foreign culture) has been, and still is, in some institutions and for some students, a more attractive alternative than enrollment in a formal campus program. The student who withdraws for a semester to travel or to enroll in another institution is a dropout. Many institutions have averted this form of dropout by incorporating into their programs a period of study abroad, with the hope of making their programs more attractive and, to some extent, channeling nonacademic interests and activities into pursuit of academic credit. Work-study, community service, and other such programs involve something of that same philosophy. The student can be absent from the campus without dropping out. The institution collects fees and the student receives credits. In more recent years, the appraisal and the granting of degree credit for life experience represent only another way to extend the college credit milieu to include activities that are, to many people, more attractive, more productive, and possibly more remunerative than enrollment in courses on a college campus. These developing views also constitute a tendency toward denial of the four-year, time-serving, credit-accumulating degree attainment conception of education as the only means of achieving personal benefits. Yet the four-year degree acquiring view of a college education lingers on and colors all thinking and actions in regard to discontinuous enrollment or termination prior to degree completion.

A second group of terms dealing with college-initiated actions severing students from the institution is also revelatory of a philosophy of higher education. A student withdraws or drops out, but a student may be expelled, withdrawn, or dropped by administrative action. In an earlier era, students whose performance, attitudes, or values were inconsistent with the standards of the institution were rusticated for a period. The implication of being forced to "reside in the country" rather than on the campus betrayed an assumption of the relatively superior quality of campus life that has not entirely vanished in the present day. Students are dropped or expelled from an institution because of failure. In the past, they were frequently dropped (or rusticated) because of morals, criminal acts, being a public nuisance, or simply because of deviate characteristics and activities intolerable in an environment committed irrevocably to certain values.

There exists another set of contrasting terms which are illuminative with regard to the concepts under discussion and the images brought to mind. The term retention implies a holding power, an adhesiveness, a quality or a set of characteristics of an institution such that an individual initially attracted to it will maintain the association and regard it as both desirable and profitable. Studies made of the changing points of view of students over the freshman, sophomore, junior, and senior years and the characterization of degree granting as "commencement" reflect a conception of the college attendance period as one of full-time involvement and commitment involving definite entry and termination points and as being preparatory to life rather than a part of it. The terms persistence, continuance, or survival relating to the students provoke a less flattering imagery by implying a perseverance made up heavily of endurance and doggedness in pursuit of the program requirements rather than a sense of growth, fulfillment, or accomplishment as a result of college attendance. The rule (common in many colleges) that failure in a course must be removed by retaking the course reveals faith in endurance and persistence as builders of character. Dropouts, at times, may result from disgust with dubious rules rather than from a decision to terminate education.

Conceptions of Retention

Previous comments have already pointed out the heavily institutional orientation of much of the discussion of retention and of the efforts to improve it. Institutional concerns tend to focus on one of three major and interrelated themes. The most common one is that of enrollment stability, although this is frequently introduced as a major factor under a primary concern for financial stability. Concern for achievement of enrollment stability leads to emphasis on recruitment, on continuous enrollment, on attempts to determine the percentage of stopout students who will return at particular times, and (in those institutions that encourage transfer students) an attempt to estimate and increase the number of transfer students. As an offshoot of concern for enrollment stability, there may also be some attention to the bolstering of particular majors and programs that are threatened by decreasing enrollment. Course offerings and enrollment stability are interdependent to a much greater extent than many faculty realize; excessive course offerings and excessive repetition of them enable and encourage stopouts and contribute to high educational costs. Failure to make this connection is exemplified by those faculty who express great concern about low persistence and enrollment instability within their department and, simultaneously with this, point with pride to the number of advanced courses offered. Obviously, any effort to increase student retention must involve faculty understanding and involvement.

Enrollment stability, of course, is intimately related to financial stability (the second theme), the institutional budget, the availability of financial aid, and the use and costs of maintenance of facilities. When student retention or persistence is low, efforts to maintain enrollment stability tend to move into channels that cause further deterioration of retention or persistence rates. Admission standards are lowered with the result that the students admitted are less likely to remain. Courses or programs (business and health fields, for example) may be added to attract a group of students with the possible result that the expenses of the program addition will exceed the income generated by the students attracted. Financial assistance may be increased by use of institutional funds. This helps to meet the enrollment target, but the additional students attracted may constitute a financial liability. Recruiting costs, especially in private institutions, are a major budget item and may run from several hundred to a thousand dollars per student when all factors are taken into account. Early dropouts obviously increase recruiting costs but added activities or programs to reduce dropouts will also increase costs.

A third theme in discussion of retention focuses on the integrity of the class unit and of the four-year program. The generation and maintenance of class spirit are viewed in some institutions as the major aspect of the education of the student, and a strong class spirit may be a major factor in fund raising among alumni groups. This conception, though an admirable one in many respects, is now essentially archaic except in a few highly selective colleges, professional schools, and military academies.

It is our major contention that (a fourth possible theme) the nature of the curriculum and the quality of education provided and acquired by students seldom come under scrutiny in review of retention. This is part of a tendency to regard a program or a curriculum as developed out of faculty knowledge, preferences, and authority, with little regard to whether students understand the basis for a program or feel any satisfaction and sense of concrete accomplishment at defined stages of progress through it. Completion of the program and the acquiring of the degree become the major objective and, as many former students withdrawing short of a degree have pointed out, being within one or two courses of a degree is not much better in regard to status or job preferment than not having gone to college at all. Thus, in some sense, the concepts of becoming educated and of acquiring a degree become equated to each other. Seemingly, it is not expected and perhaps not even desired by the faculty that students have any sense of accomplishment from individual courses or from a combination or group of courses. Undergraduate education still operates on the basis of deferred gratification as a major value. Persistence in a program is regarded as evidence of determination and strong character.

If our undergraduate programs could be reexamined and reconstructed so that students had a tangible sense of progress and achieved some insight into the further growth and development engendered by continuation of a program, the issue as to whether or not students remain continuously enrolled through a four-year program might become of minor import. At the same time, educators based in particular colleges could view the transfer of students to other institutions as evidence of a continuing interest in education and perhaps of the achievement of a more precise focus on what education means to that particular individual. In some states (California, for example), there has arisen an interest in the extent of continuance of students in the state system of higher education. The shift in focus from whether an individual remains in a particular institution to whether that individual is able to attain significant educational benefits within a system of higher education is consistent with the concept of state coordination and state support and much more in accord with the general commitment of government to provide needed educational facilities than is the narrow focus on the success of individual institutions in retaining students. Indeed, this concept, as it applies to the flow of students from institution to institution, has led to the abandonment of one major study that proposed to study retention at the national level.

The development of an attitude in students that recurring involvement in education can be personally and economically advantageous is also a more significant outcome than a pattern that implies, on one hand, that anything less than the full four years and the acquiring of a degree constitutes failure while, on the other hand, completion of four years and the acquiring of a degree provide a satisfactory terminus of formal education.

Enrollment stability, budgetary concerns, and the tendency to equate college education to a four-year concentrated effort capped by a baccalaureate degree are the three most important factors underlying concern about retention. All of these, unfortunately, tend to place blame for discontinuance on individuals and to ignore deficiencies of the institution, on one hand, and the possibility of tangible benefits from less than a four-year residence, on the other. Since some part of this limited perception originates in the terminology, it is desirable to reexamine that terminology and attempt to clarify and more precisely define the term.

Definitions

The definitions given for retention vary greatly. Many institutions define retention in terms of receipt of a degree, citing time allowances ranging from "four years" to "eventually." Liberal arts colleges tend more than universities to emphasize continuous four-year attendance culminating in a degree. For example, so fixed is this concept that various liberal arts colleges at one time or another have abandoned senior comprehensives because of the virtual impossibility of withholding a senior from graduation if course requirements were completed.

Most institutions making studies of retention concentrate on the retention of first-time freshmen to the attaining of a degree within four or five years. This focus reflects size-related constraints and a tendency to view the degree program as a four-year, sequential, integrated experience. In addition, a study limited to four-year, full-time students is much more manageable in terms of time and staff than is a study which includes part-time, transfer, and stopout students extending over an unspecified number of years.

Some institutions (six out of 111 in a survey made early in the study) consider a student to be retained if he or she earned a less-than-degree certificate, gained entrance into professional school (sans degree), or achieved his or her specified academic goals. This constructive student goal-oriented conception of retention is commendatory and deserves more attention. It also contributes to the ambiguity of the retention concept and complicates any study of retention by requiring assessment of individual status and intent.

Seventy-one respondents in the aforementioned survey defined retention in terms of student "persistence," either from term to term or year to year. Twenty-six of these limited persistence to full-time enrollment during consecutive terms--that is, with no allowance for slowing down or stopping out. One major state university reported that it has limited retention studies to persistence within the same college at the university. By implication, transfer from one college to another in the university is uncommon, undesirable, or impossible. Three institutions have equated retention to "eligibility to return" rather than to continued enrollment. One institution states that students are considered to be retained so long as they are not academically dismissed or suspended. Another university response indicated that the primary concern is with maintenance of a continuing contact with the student. This view apparently reflects an awareness of and concern for part-time students.

Five institutions reported that retention was dealt with solely in terms of changes in total enrollment ratios as opposed to the continuation of individual students. One college reported that retention is determined by dividing the number of degree recipients in a particular year by the number of First Time In Any College (FTIAC) freshmen four years earlier. Obviously, this is a simplistic approach. If transfer students and students of five or more years are included in the number of graduates, this procedure affords no indication as to how many students actually stay at the college once they enroll. In fact, the resulting ratio could readily exceed one, although none such was reported.

For budgetary planning purposes, other institutions compare a full-time head count from one semester to the next. As noted by Roger Ludeman at the University of Toledo, the real issues of retention are obscured by looking solely at head counts of total enrollments. However, as he says, "It is difficult to convince people of a retention problem when enrollment is up, even though [in each quarter] one in every four students is new on campus." Enrollment stability rather than the educational benefits received by students is obviously the major concern in many institutions. Returning stopout students and in-transfers are ignored as individuals but valued as means of filling vacancies, at least in retention studies and reports as made in numerous institutions.

These examples of the various meanings assigned to retention demonstrate the need for more precise definitions. From our consideration of the broader meaning and usage of retention transcending education, we conclude that the term retention is an unfortunate and inappropriate one. We prefer terms that recognize that, except for administrative actions involving expulsion or termination of enrollment, the initiative regarding continuation or withdrawal rests with the student. Both the terms selected and definitions proffered reflect this view.

Persistence. A persister has been defined as an individual who maintains enrollment without interruption at the same college or in the same program until the program is completed or degree acquired. Although degree-granting institutions will usually interpret graduation as the goal of persistence, alternative conceptions (non-degree, terminal programs, or even attainment of personal individualized educational goals) are appropriate if persistence is regarded as an individual trait or behavior rather than as an institutional need or desire. It is worthy of note that persistence is implicitly regarded as a virtue, although careful consideration of individual circumstances might suggest that persistence in the face of distracting problems or of overwhelming odds may be unwise or inappropriate. In particular, an individual may pursue an education on his or her own time schedule and on a full- or part-time basis and still be regarded as a persister. Also, interruption of study may be desirable for many individuals even though inconvenient and costly for the institution. Non-attendance in summer is an accepted break not usually considered as an interruption. Indeed, summer attendance is overtly or subtly discouraged by some institutions except as the individual removes failures or makes up deficiencies. A persister can be full time or part time, although common usage refers to the former. Graduation for full-time persisters is usually on time--that is, within a term or at most a year of the normal period of years required to complete program requirements. This on-time characterization arises out of the traditional concept of a baccalaureate degree as a four-year stint (or four-year loaf made of father's dough, as some wit has remarked). Persistence is the individually-oriented counterpart of the institutionally-oriented term retention and is much the preferable term.

Dropout. An individual who leaves an institution is a dropout. This is a highly ambiguous characterization revealing ignorance rather than understanding of the behavior involved. A dropout from an institution may return at a later date, may transfer to another institution, or both transfer and return thereafter into the original or another program. Many individuals labeled as dropouts at a point in time are actually persisters but in another institution, stopouts or discontinuous persisters in their original institution, or attainers of a personal educational goal different from the formal programs and degrees offered by the institution. Dropout is a deplorable term and its use should be avoided as casting a stigma on the individual thus characterized and (by its implicit connotation of deficiency) as tending to erase any concern on the part of faculty for evaluation of their own effect on the discontinuance of students. One reason for the widely prevalent indifference to dropouts, except possibly in terms of financial exigency, is that voluntary dropouts are frequently confused by segments of the faculty, with administrative actions terminating or dropping students because of inadequate performance, failure or unacceptable behavior. Individuals ejected for these behavioral reasons should not be counted as dropouts. Nevertheless, it is true that some dropouts are marginal students whose voluntary withdrawal avoids the indignity of ejection. However, some of these marginal students might do well under other circumstances or in other programs and certainly not all discontinuance by students results from marginal performance. The term dropout should be avoided in favor of the less pejorative terms "transfer" or "discontinuing student."

Stopout. An individual who discontinues his or her education for a period of time (usually for some cogent reason) but with intent to return and complete a program or degree is a stopout. The reason may be personal or circumstantial, voluntary or involuntary. The pursuit of these distinctions is not likely to be useful, for the difference between voluntary and involuntary lies in the intent or state of mind of an individual as much as on variable circumstances. The student who dies a natural death is presumably an involuntary dropout whereas the one who commits suicide is presumably a voluntary one. Stopouts, by intent, may become immediate transfers or permanent dropouts. The stopout definition is fulfilled only when the individual reenrolls in the institution. Any dropout can be regarded as a temporary status stopout subject to final confirmation as a dropout only by death or by completing a degree elsewhere. Neither accomplishment is likely to be reported to the original institution. A teacher regularly attending summer school to complete degree requirements is, in one sense, a persister, while in another a "regular stopout." Obviously, both dropout and stopout are ambiguous in meaning, deplorable in implication, and institutionally rather than individually conceived even though they apply to the individual. For those students who simply vanish without any expression of intent, we would recommend the use of the term "discontinuing student," which is general enough to cover the possibilities of dropping out, stopping out, or even transferring.

Attainer. This term has been used by a few researchers for individuals who have attained personal goals short of or distinct from formal programs or degrees. Use of this term requires determination of individual goals and/or determination of the individual assessment of whether these goals have been met by the studies completed. If securing employment is the goal and the courses taken enable the individual to achieve that end, goal attainment is obvious. Institutions (especially community colleges and large urban universities) might well give more attention to this concept of goal attainment. In some cases, clarification of individual goals and an individualized program of goal attainment might generate persistence to that goal. The term attainer is significant in suggesting a goal rather than a degree orientation but has no other practical value. We accede to the importance of the idea but reject use of the term.

Transfer. In common usage an enrolled student who changes his or her program, major, or college is a transfer. However the designation of transfer is best restricted to individuals who enroll in a different institution from that previously attended. A transfer student in this sense may continue a program already begun at a previous institution or enter an entirely different field. A transfer student returning to his or her former institution is a transfer student for both institutions and might also be designated as a stopout or returning student in one and a dropout in the other. Individuals shifting from one program or college to another in the same institution will here be designated as program or major changers rather than as transfers.

Program or Major Changer. An individual who changes from one major or program to another in the same institution is a program changer. Many faculty members and administrators actively discourage such changes as indications of immaturity, frivolity, or laziness. A high degree of specific program requirements also discourages such program changes because of effective loss of credits and extension of the period of study. Thus the flexibility in program change and individualization that might be effective in arousing commitment and increasing student persistence may be virtually nonexistent in some institutions. The fact that studies of student persistence, with very few exceptions, have ignored major or program changing as a factor bears out the existence of a prejudice against such behavior. This circumstance, coupled with the widespread failure to consider student persistence as an individual phenomenon, is at the root of the indifference to persistence displayed in many institutions. When enrollment stability and budget rather than educational benefits received by students are the prevailing concerns, crude indices of enrollment stability may suffice but, even though these are vital concerns, they should not displace attention to the individual and the educational issues involved. The shift in attention from institutional retention to individual student persistence in development is essential. Many researchers would disavow both an institutional bias against the changing of majors and a disinterest in its significance and argue that the lack of data is really the culprit. However as we shall show, the data necessary for analyzing persistence by major are so minimal that this apology is suspect.

The Specific Uses of Student Persistence Studies

There are numerous ways of collecting and using data on student persistence depending upon the underlying concerns and purposes. The survey mentioned earlier suggests that the major reason for studying persistence is to estimate future enrollments from term to term and year to year. This use was reported by approximately one-half of the institutions surveyed. Three additional colleges used the data to review their admissions policies (whether to make them more stringent or less selective was not specified), and three more used the data for recruiting and planning. The University of North Carolina at Chapel Hill reported an intent to use the information in "selectively recruiting those students most likely to stay to a degree." The University of Alabama attempted to measure students' "staying power," presumably with the same thought in mind. In contrast, 17 institutions focused on procedures for retention of students already enrolled. The procedures ranged from further definition and investigation of persistence problems to promoting and evaluating retention programs. Many institutions have found that in periods of reasonable stability the simple ratio (with no refinements) of second semester to first semester enrollment can be used to provide an adequate indication of at least the second semester enrollment. Similarly, return rates on students from spring to the fall term, especially when accumulated by class level, may be sufficiently stable that the number of returning students by level can be estimated. With these return estimates added to estimates of new student enrollment (both first-time freshmen and transfers), fall semester enrollments may be predictable within reasonably close limits. However in those institutions where many students attend on a discontinuous basis, estimation of the number of students that may reappear in a given semester, not having been enrolled for the immediately previous semester, is one of the most uncertain aspects of prediction and the estimates seem to be subject to marked variations depending upon economic and other factors that are neither clear nor measurable.

Concern about enrollment prediction may result in further refinements of this simple ratio of term-to-term enrollments. The persistence rate of students at various stages of progress varies and tends to increase with progress (at the rate of two percent per term, one researcher suggested). Since the size of class enrollment varies somewhat from one year to another, application of persistence ratio by class level and perhaps separately for native and transfer students adds some refinement to the prediction process. If new first-time freshmen and new transfer students are accepted in a second semester, the persistence rates for these groups may also differ from the general pattern. Even in large institutions, year-to-year variations are apparent and such estimates are therefore prone to error. In smaller colleges, the application of such refinements would require ascertaining the intent of individuals--a delicate process but one that in itself might tend to increase the persistence.

It is worthy of notice that in the term-to-term prediction approaches there is frequently no obvious concern about increasing the persistence rate of students.

The focus is solely that of having sufficient evidence on hand to facilitate program, curriculum, and instructional planning. What courses should be offered and how many sections of each will be required? Obviously however, if enrollment falls far below estimates based on these crude procedures, concerns will be generated as to the reasons for this and attempts made not only to refine the predictive procedures but also to seek enrollment stability.

At the least, 48 users of persistence data were directly concerned solely with predicting or stabilizing enrollments. Others have the same ultimate intent, but differed on the immediate focus. For example, five colleges used the data for "determining the reasons why students leave" and four colleges for "identifying campus problems and strengths." One may assume that these uses imply an intent to correct any problem situations thereby discovered and thereby improve persistence. Nine institutions (seven private liberal arts colleges and two private universities) reported using the data for planning the annual budget, a major portion of which is derived from student fees and tuition.

Only four of 111 institutions mentioned evaluation of the quality of academic offerings in commenting on their studies of retention. Three colleges have used the data in evaluating major programs and/or special studies programs, and one reported the development of faculty workshops to improve teaching. Some respondents cited administrative actions taken as a result of this information. Eleven reported that data had been used in "influencing policy and operational decisions" and 14 for "planning and programming." Two used the data for revising exit procedures and one for "considerations of probation and reinstatement." Other respondents used the data for housing considerations (2); planning student activities (2); and providing consumer information to students (3). Nine institutions (including seven public universities) reported that either such information has not been used at their institutions or that it has been circulated but not acted on in any purposeful way. Twenty-nine colleges (including 16 public universities and nine private liberal arts colleges) used the data for general information, four more for "written and oral reports" within the university, and another six colleges for fulfilling government reporting requirements. One university reported that the New York State Education Department requires survival and graduation rates for freshmen in degree programs. Another university conducts studies each fall in conjunction with HEW-OCR (Office for Civil Rights) reporting obligations.

Procedural Changes

In efforts to improve retention, procedural changes were reported in conjunction with almost every facet of institutional operations: recruiting and admission to classes, financial aids, and extracurricular activities. Some of these procedural changes were mentioned in the preceding discussion as well since, in addition to projecting enrollments, many of the respondents used the data as criteria or catalysts for instituting what they considered to be pertinent program changes.

One public university provides "survival information" to prospective and enrolled students, apparently to discourage high-risk students from attending and thereby to reduce the dropout potential. Six institutions (three private colleges) decided to use stricter admissions requirements to screen students, reflecting the findings of studies showing better retention for students with higher SAT scores and high school GPAs. Studies have also shown higher retention rates for full-time (as opposed to part-time) students. This probably contributed to one university's effort to encourage students to enroll full time. Incidentally, it would be of interest to know the results of such efforts, for one might readily suspect that attempts to make full-time students out of part-time ones might be viewed as discouraging part-time attendance.

Three public universities and three private liberal arts colleges cited changes in suspension and probation procedures. Four of these arranged interviews and/or contracts with students on academic probation, and one established more lenient suspension programs for freshmen. The interviews were intended to establish a more personal student relationship and give the student a feeling of more involvement. Contracts could supply shorter-term, more visible goals to a student who feels that day-to-day college life is not very productive or rewarding. Three additional schools added exit interviews for non-returning students and seven devised "early warning" systems for dropouts. The hope was expressed that the interviews might afford students a more favorable impression of the institution and thereby increase the possibility of their eventual return.

Ten institutions made changes in class scheduling and registration. One public university simply said that it had "improved the registration process." Five schools have extended class scheduling by adding evening and weekend sessions. One private university has improved access to programs by reducing the number of closed courses. Twenty-four of the reported changes were concerned with programs and instruction. Sixteen of these were "expansion or reevaluation of curricula" (nine university-wide programs and seven specifically freshman programs). Eleven of the 16 were reported by private liberal arts colleges. Two schools reported the introduction of varied course work and teaching techniques, and one sponsored faculty workshops on instructional improvement. Two public universities expanded their Development Education Centers, and two put greater emphasis on advisement, program planning, and departmental interaction. One college enlarged its foreign studies program. To assist students in continuing their planned programs, four public institutions (one college and three universities) have increased the availability of financial aid, and one private liberal arts college converted an increased proportion of financial aid into work-study arrangements. The success of these ventures had not yet been established and it is uncertain what effect these changes will have on the actual quality of education that students receive. Periodic reevaluation of curricula seems inherently to be a good idea--as times change, so do educational needs. Adding programs and varying techniques, however, may only be a minor refurbishing of programs requiring basic reconstruction. Without learning more about the exact nature and effects of these changes, no conclusions can be drawn. Furthermore, the success of any change depends on the personnel involved as much or more than on the substantive nature of the change itself.

Additional program changes were directed more toward the students' subjective experiences and the attitudes generated by their educational experiences. Nineteen institutions (12 private colleges, six public universities, and one private university) attempted to ascertain student feelings through interviews, questionnaires, and reports from advisers. Six of these decided to pay more attention to freshmen in what they perceive as a crucial year of adjustment. Two institutions concentrated on sophomores. Five more institutions tried to improve student living conditions, and seven emphasized improvement of student-faculty contact. This group of responses centers on the idea that students are more likely to stay if they feel at home in their environment, but attempts to integrate the student into the educational community by social, fraternal, recreational, or residential activities may detract from rather than supplement the academic benefits of college.

Another group of program changes can clearly be leveled "add-ons," that is, programs and activities which are extraneous to the university's strict and narrowly defined goal of "education." They were also the largest group, numbering 144, or 55.6 percent of the total 259 program changes reported. (Contrast this with instructional or curricular changes which comprised 9.3 percent of the total.)

Eighty-nine of these "add-ons" were informational services for students, including 16 career development programs and 15 orientation/placement programs almost equally divided between the public universities and private liberal arts colleges. Changes in advising were cited by 49 institutions: 21 improved their advising services, seven added faculty advising programs, and 21 established special advising/counseling programs for a specific group within the student population, such as new students, students with undeclared majors, "lower ability students," and so forth. Sixteen more either improved their counseling services (11) or established peer-counseling programs.

Twenty-three reported program changes that were intended as helpful intervention: 16 schools improved their remedial, tutorial, and study-skills programs, one added a "recreational therapy" program, and six established support programs. These all seem to be devised to help students function more effectively in their college environment. The added costs of such programs immediately became apparent. The benefits are less obvious, and no institution was able to provide definitive evidence on increased benefits or persistence.

To give students a broader and more varied environment, six schools (including five private liberal arts colleges) have made practicum experiences more available to students, and two public universities have established honors programs. Part of the impetus for the practicum experiences could be a desire to make the relevance of educational programs to career aspirations more obvious by relating increasing knowledge to "real" life.

At the other end of the work-play continuum are changes in recreational programs. One private college expanded its athletic programs and two more reorganized their student centers. Three schools added support of residence hall extracurricular activities. One explanation given for including these programs in the retention effort refers to student involvement. The hypothesis is that the more personally a student is involved in the university the more likely he or she is to persist to completion of the program. If there are few interesting activities on campus, a student is more likely to go home for the weekend. Thus school becomes just a weekday work place and the student's real involvement remains at home. Some residence hall and food service personnel may actually prefer it this way.

Many other add-on program changes designed to improve retention were reported. None of these add-ons has been demonstrated to be cost effective. It could be that many institutions are spending scarce resources on programs from which neither the institutions nor their students are receiving any comparable benefits. This problem was one of the concerns of this research project. Part of our purpose was to see what is being done in the area of retention and to investigate the effectiveness of these well-intentioned efforts.

This purpose is shared by the last group of program changes to be reported here. Seven institutions have established retention "task forces," one has changed the data system in order to facilitate retention studies, and ten have sponsored retention workshops and advisement for faculty and staff. Two institutions have reported attempts to review and evaluate retention programs. In total, there were 259 reported program changes for the purpose of improving retention, or approximately two to three changes per institution.

If the attention to student persistence emphasizes individual aspirations and benefits, there are several possible approaches. Leaving to one side for the moment the matter of degree completion to be discussed as a separate item, attention may be given to the years or terms completed by students, to the credits acquired, or to the educational goals achieved. From the viewpoint of the institution, if the average number of terms completed or the average number of credits acquired can be increased significantly, the institution will achieve greater stability in enrollment with a diminution of the effort required in seeking new students. Whereas the usual approach to retention looks at the percent of students continuing for various periods of time, the emphasis on persistence could be based upon an average of the number of terms or number of credits acquired by students. From the viewpoint of the individual, attention should be focused upon defining and attaining some meaningful educational goal that would not necessarily be defined in terms of degrees or existing programs. Although the ideal, from the point of view of the college, would be to increase the number of students remaining to acquire a degree, any gain in the average number of terms that students are continuously enrolled is a gain in enrollment stability. If many part-time students are involved, it may be more meaningful to account for the number of credits completed with the emphasis on persistence then oriented to the completion of larger credit packages having definite significance to the student. In emphasizing persistence, therefore, it would be important that student goals be identified in relationship to courses or that the total degree requirements in a program be broken into significant pieces so that students that are considering withdrawing for a period of time might see that completion of a certain number of credits, courses, or semesters would provide them with a meaningful breaking point in their education rather than a simple discontinuity.

Liberal Education and Persistence

Many of the statements about liberal eduction have emphasized the significance of a continued immersion in the so-called liberal arts as essential to the maturation and the cultivation in the individual of a sense of appreciation and commitment to enduring values and the finer things of life. But as the meaning of liberal education, both in outcomes and in process, has become clouded by a proliferation of disciplines and a focus on the absorption of content rather than values, the significance of the formal educational experience in college and the sequential and integrative nature of that experience have become increasingly uncertain. To some extent, the clarity of purpose and the holding power of educational programs have been displaced in many colleges by an emphasis on student activities or social activism. It may be desirable that students become increasingly concerned and involved in social issues and phenomena of the day, but premature activism can jeopardize the attainment of insight and understanding through objective scholarly study.

Many students have quite understandably come to view student activities programs on campuses as meaningless and irrelevant to the major purposes of college attendance. They have come to see many of the endeavors of the institution in achieving athletic, academic, and social status as irrelevant to, inconsistent with, or even inimical to the provision of quality undergraduate education and the values associated with it. Colleges and their degrees are no longer beyond doubt as to their intrinsic worth or as a step to an assured successful career. Many students are unwilling to undergo the prescribed immersion in an undergraduate program that was characteristic of an earlier era and still is held as an ideal by many educators. Thoughtful critics (including some students) are likely to wonder whether increased retention achieved by improving or expanding peripheral aspects of campus life will really improve the quality of the education for individuals and bring about greater relevance between education and the needs of society and individuals. An alternative is to demand that the academic personnel of the institutions build more attractive programs, including a sequence and relevance that provide students a sense of progress and accomplishment and that help individuals to see that their educational experiences are immediately related to personal and social goals and values. A natural further step is to ask whether, for many purposes, the concept of education set aside as a peculiar mode of life for a specified period of years is any longer appropriate to the majority of people in the society and technology in which we currently exist and are likely to exist in the future. Perhaps, indeed, education, as it has been viewed in the past, is archaic. To some extent, this becomes apparent when one examines the various conceptions of retention upon which studies of retention and persistence have been based.

Degree Completion and Persistence

If attention in study of persistence is focused upon degree completion, then the usual approach has been the determination of the percentage of first-time freshmen acquiring degrees within some specified period of years. If, however, an institution accepts a large number of transfer students, it would be desirable to determine retention rates for the transfers broken down into groups on the basis of the class status or the number of credits granted at the time of entry. In this approach, retention rates would be determined for all new students entering an institution, but with the new students subdivided into groups that would permit examination of differential retention rates depending upon level at the time of enrollment in the institution. Data from several institutions suggest that differential persistence rates do exist both by level and by type of institution from which transfer is made.

Study of degree persistence on a full coverage basis would require establishing a master list of all students at the time of entry to the institution with subsequent checks against this list to identify those who received a degree. For example, an institution might know from these data that, after a period of years, a total of 5,000 students had initiated study in the institution. The checking of graduates against this list establishes that, after six years, 3,000 of that original 5,000 have achieved degrees from the institution. The degree persistence rate then is 3,000 divided by 5,000, or 60 percent. This approach to determining degree persistence rates can be done on a continuous flow basis rather than by follow through of particular entry groups. However if time, major changes, and other factors, such as place of residence and student activities are included, this simplistic approach does not suffice. It could however be joined with an intensive analysis of samples or of case studies to add insights to the single statistic.

It is also possible in looking at persistence to ask the question as to what percentage of students enrolled at a particular time in the institution ultimately acquire degrees from it. This approach involves using the list of students enrolled in a specified semester as a master list with graduation being identified over a span of years thereafter. It provides a ready answer to the question of what percentage of students enrolled at any one time may be expected to acquire degrees from the institution. The rates established from this approach will necessarily be higher than those that are based upon new students. The reason is that, for this group, the base is the total enrollment of a particular semester and includes individuals at all levels, some of whom have already been enrolled in the institution for one, two, or three years. This means, for example, that the denominator for computing the persistence ratio is composed only of the students enrolled at that time and does not recognize that, for the advanced students, a more appropriate divisor involves the students with which that group was originally enrolled. Putting it another way, since the persistence rates for groups (or classes) of students increase as the groups progress toward a degree, a retention rate determined on the basis of the total enrollment at a particular point in time is something approximating a weighted average of the persistence rates by class level. There are a number of factors that may tend to modify that ratio to a greater degree than one based upon the percent of new students or of entering freshmen in the institution that acquire a degree over a span of time. However it is again important to note that a change in the makeup of the student population in the institution can change the degree persistence rate even though no attempts have been made to increase persistence. If the number of students transferring into an institution at the junior level markedly increases, the fact that the persistence rate at the junior level is larger than it is for freshmen will raise the overall retention rate. In times past, universities have found that the development of new community colleges in their vicinities brought more transfer students to the institution. With this new development, the institution might then find that the percentage of its students acquiring a degree increased. It is interesting to note, however, that the degree persistence rate for native students at a given class level will usually be somewhat larger than the rate for students transferring into the institution at the same level. Adjustment to a new institution and possibly new living conditions exacts a toll upon new transfers.

Individual Benefits and Persistence

There is one more approach to the study of student persistence that has been attempted but is generally difficult to carry through with any high degree of accuracy--this is the approach that attempts to assess the benefits acquired by individual students as the result of experience in the institution. This is the "value added" concept, extensively used by economists. In part, this approach relates to the discussion of persistence earlier. If the student entered the institution with aspirations of less than degree nature, the natural question to raise is whether the person acquired that for which he or she came. This may be difficult to ascertain, for many students are unclear as to why they are attending college or what they hope to gain from it. The concept of a liberal education is too esoteric to serve as a goal, and a meaningful definition is difficult to find in most institutions. Furthermore, a liberal arts degree as a means of upward social mobility and entry into a profession no longer has utility. The value-added concept is intriguing but ambiguous in that the values involved may be personal, social, or economic and may not be assessable (if at all) until some time after the completion of an educational program.

Mature individuals may attend college for a limited period of time with a definite purpose in mind; hence they may be able to state exactly what that purpose was and whether it was accomplished. The individual who plans to travel to a foreign country and a year or two prior to that enrolls in a language course may or may not have achieved all of the benefits originally sought. It is perhaps worthwhile to know this even though the purpose and the benefits sought are limited. On the other hand, some individuals attending a college for a period of time may find that another type of education or a different institution is more in accord with their ultimate goals. If the institution assisted in reaching this definition, then benefits have been derived from attendance at the institution. Whether or not the institution wishes to enter into this kind of assessment depends both upon philosophy and resources.

The grocery store that sells several different types of catsup assumes that the person buying a particular brand finds it satisfactory or tries another until he or she is satisfied. The store offers the articles but takes no responsibility for assuring that each purchaser gets the particular articles most suitable for his or her needs. If the store is out of the particular brand desired by the customer, a clerk may urge an alternative or even suggest mustard. In contrast, an education is a very personal affair, and it may be argued that the institution does have some responsibility in providing the consumer with insights into the nature of the various commodities available and with criteria to help that consumer make a choice among them. If, in fact, the consumer is, at a moment in time, unable to make a choice among the various courses and programs, then the institution might well accept as a responsibility the provision of assistance for that person to arrive at the stage of maturity and insight whereby meaningful choices can be made. This approach to assessment of benefits for students has implications for counseling and advising, but it also has implications for the courses, programs, and kinds of instruction offered in an institution. There is a tendency on the part of institutions and their faculties to develop courses and programs in terms of their own preferences and biases with the assumption that the students don't really know what they want or need and hence should and will accept what is offered. The failure of institutions to retain students to program completion or degree acquisition represents, on one hand, a problem with students who do not know what they want and are unwilling to pursue a pattern of education simply because it is deemed desirable by the faculty of an institution and, on the other hand, students who know in part what they want or at least what they like but do not find it in the programs offered to them. There are still other students who have in mind a goal that is apparently facilitated by the offering of an institution and is therefore pursued whether or not all aspects of that offering are interesting or relevant. And there is, finally, a group of students who, to some extent, enjoy learning and are amenable to suggestion and direction by the faculty who will pursue the discrete aspects of an educational program without asking the embarrassing question of what this adds up to or where it leads. Much of the problem of persistence probably arises out of the fact that faculty members tend to prefer the latter group of students rather than undertaking the responsibility of providing the kind of educational program that will be meaningful and attractive to a wider group of students.

Summary

Colleges have discussed retention and the development of means to prevent students from withdrawing rather than insisting that programs be made attractive and relevant so that students persist in them because of the benefits received. In an era wherein few persons (including college administrators, faculty members, and ministers) are willing to await their rewards in an after life, educational programs cannot be successfully operated on the basis of deferred gratification. Persistence in an educational program is most commendable and most likely to be present when the benefits of that program are apparent and relevant to the aspirations of the individual.

Chapter Two

Prior Studies of Retention and Persistence

Unless an institution has made a careful and purposeful study of student persistence, it is quite likely that the figures assumed or reported by the institution will be both inaccurate and meaningless as a basis for any program of understanding and improvement. Nevertheless, some information that is rather readily collected may suggest directions for further study. A state university in California found, apparently somewhat to the consternation of the researcher, that only about 40 percent of the entering freshmen graduated within five years. Apparently the assumed rate prior to that had been much higher. This rate was indeed much lower than found elsewhere, but was well above that found among the institutions of the California State University and College system in 1973 (Daigle, p. 5). A highly regarded private college in California found, a few years ago, that, as a result of the extensive community and state college system in that state, one third of its student body was made up of transfer students. Another widely known West Coast private college reported during an informal visit that, although the number of transfer students from community colleges had markedly increased in recent years, no effort has been made to study this group, the presence of which is regarded with some distaste even if essential to budget balancing.

A private women's college in the Southeast reported 60 percent persistence to a degree. A largely male institution in Pennsylvania reported 70 percent. Several private colleges in the Midwest reported persistence rates of from 42 to 55 percent in four years. A largely black private college in the South reported only 32 percent of its freshmen attaining degrees in five years, but explained that its major problem was with the successful efforts of nearby colleges in attracting its best students.

Such institutions as Brown, Yale, and Harvard report persistence rates of from 85 to 95 percent, with the figures at 90 and above usually including a period of six or more years from entry into the institution. Some institutions reporting a high retention rate ignore those individuals who withdraw prior to the completion of the first semester. Presumably this is a small number, but the procedure illustrates the idiosyncratic and sometimes deceptive nature of persistence reports when they are used to imply the high quality of the student body.

Publicly-supported universities generally report lower retention rates than the elite private institutions, but exhibit a similar range of variation. The major campus of a state university in the East reported that 75 percent of its students (new freshmen, presumably) receive degrees after six years. A Canadian university reports 74 percent after ten years. Another Eastern state university, following through its 1973 freshmen, found that 67 percent of them were graduated and noted that 30 percent of the graduates received a degree in a college or program other than the original one. In Kansas, a study of the state institutions (six in number) reported retention rates varying from 22 to 40 percent. In another state, one institution that is part of a multicampus system found low persistence rates, but characterized the campus as a feeder institution for what is widely regarded as the "main campus" and therefore reasonably suggested that persistence rates had to be appraised accordingly. A number of institutions, especially in some Western states, reported that significant percentages of their entering students have entry intentions that are less than degree in level. One such institution reported that only 20 percent of its entering students graduated from that institution but that something like an additional one fourth transferred to other institutions. It also reported that many of those who discontinued indicated they had completed their intended education.

Several public institutions reported increase in persistence rates associated with progress through a program. This amounted to around four percent for each completed semester--that is, after a year (enrolled two semesters) the persistence rate into the third year for those students remaining would be eight percent higher than that from the first to second year. Summary figures on persistence to a degree in various types of institutions are indicated in Table 1. These are averages, but reflect clearly the differences in persistence rates of the various types of institutions as well as the consistency in rates by type over one- and two-year spans. Lenning, et al. (1980, p. 12) summarize as follows: "In brief, of an original entering freshman class at a four-year college, up to 50 percent will still be present four years later, 35 to 40 percent will have graduated at the end of four years, and 20 to 30 percent more will graduate eventually." Note that this provides a range of 55 to 70 percent degree completion.

These persistence rates can be viewed in a different manner if the attention is focused on year-to-year persistence. Assuming that 70 percent of entering freshmen return for the sophomore year, that 78 percent of the sophomores return for the junior year, that 86 percent of the juniors return for the senior year, and that all those entering the senior year ultimately receive a degree, the degree persistence rate for the original group is the product of .70, .78, and .86 or .47. This figure demonstrates that the ultimate impact of what appear to be reasonably good year-to-year retention rates may produce a rather low rate of degree retention. This summary characterization takes no account of in-transfers and is a composite of all majors and degree programs. Such data indicate the general extent of the retention information available in most institutions. Many do not have that much.

Table 1

Retention and Graduation Percentages for Entering Freshmen by Type and Number of Institutions Reporting

Institution	Retention After One Year for Freshmen Entering:					
	1975-76		1976-77		1977-78	
	N	%	N	%	N	%
2-Year Public	74	55	82	55	92	53
2-Year Private	27	63	29	64	30	63
Nonsectarian	12	63	12	62	12	64
Religious	15	61	17	65	18	62
4-Year Public	99	68	103	67	104	66
4-Year Private	207	71	222	71	227	71
Nonsectarian	66	73	72	73	76	74
Religious	141	71	150	70	151	68

Institution	Retention of Entering Freshmen After Two Years				Graduation After:			
	1975-77		1976-78		3 Years		5 years	
	N	%	N	%	N	%	N	%
2-Year Public					188	41		
2-Year Private					46	61		
Nonsectarian					18	63		
Religious					28	60		
4-Year Public	85	56	78	55			135	53
4-Year Private	176	57	178	57			306	60
Nonsectarian	52	63	55	63			105	64
Religious	124	55	123	54			201	58

Note: Reprinted (with slight modification for clarity) from Beal and Noel (1979).

Studies of persistence made at two state institutions included a comparison of the number and proportion of applicants in various fields in comparison with the courses offered in those same fields. The data indicated that the arts, humanities, and social science areas offer the highest percentages in courses taught and record the lowest persistence rates. Any interpretation of this information would need to take into account the fact that these content areas are broad and diverse thus justifying, in some part, the range of courses offered. On the other hand, the lack of a clear focus and of career implications of majors or programs in these three broad areas may be productive of low persistence rates. Persistence may well depend more upon finding a match of individual career aspirations and their programs than upon other factors.

Commentaries on Various Studies

Brigman and Jacobs (1979), in a persistence/attrition study made of the freshman class of 1974 at Indiana University, found that of 10 freshmen enrolled in fall 1974 only seven remained by the fall of 1976. The authors commented upon this as a loss of institutional investment of time, energy, and dollars involved in recruitment, teaching, advising, record maintenance, housing, and other program aspects and supported this with the comment that, while the graduate reflects institutional effectiveness, the nongraduate erodes institutional capacity and credibility. From the student point of view, the potential loss of earnings and the costs of the educational experience to date are noted. Much is also made of the feelings of failure and the disappointments experienced by the students who withdraw, by their friends, and by the community. As usual, many of these comments are imaginative rather than factual. Such statements represent a typical and traditional point of view about withdrawals or dropouts and provide the rationale for initiating a program to retain students and facilitate the completion of degree requirements for each student admitted. However a subsequent study by Brigman and Scager (1979), again at Indiana University and again focusing on stopouts, dropouts, and transfers, found that both dropouts and stopouts lack a definite career choice and tended to be dissatisfied with their personal achievement. This suggests one of the major reasons for withdrawal from an educational program and perhaps provides the most potent challenge to an institution concerned with student persistence and retention.

Ramist (1981) in another study reported that 73 percent of those who withdrew from four-year colleges because of low grades indicated that they lacked a definite goal, whereas only 45 percent of those who withdrew with higher grades so reported. Differences in ability may be involved, but one possible hypothesis is that students without career plans are not highly motivated to remain or achieve in college. Lacking a career goal or a match between program and goal, college attendance can be viewed as a waste of time and money. Another is that students with high grades may find in those grades a sense of accomplishment denied to those who merely get by.

Astin (1975b) pointed out that a significant clue to the importance of academic factors in withdrawal is found in the fact that students report boredom with courses as the most frequent reason for leaving college. Astin goes on to remark that institutions would be well advised to undertake studies of the reasons for student boredom that may well arise out of poor teaching, inadequate courses, and unnecessary requirements. This implies, probably correctly, that if student boredom could be reduced, many students who discontinue their education might remain. However, this approach involves overt attempts to assess and change instructional and curricular practices in an institution--a task of great difficulty, and one fraught with many perils. Most institutions concerned with the high rate of attrition have avoided confrontation with the academic phases of the program. Rather, they focus on those facets of the operation that are more accessible to manipulation. One attractive possibility is to attempt to admit only those students who are most likely to persist. This would require the identification of characteristics that are differentially apparent (in kind or amount) in persistent and nonpersistent students. This approach leads to a list of statements such as those furnished by Pantages and Creedon (1978, p. 57ff) indicating that such factors as age, sex, father's occupation, family income, parental education, and the like are not primary factors in attrition or at least have limited value in predicting attrition. Likewise, home town location and size, size and type of high school do not furnish significant clues. Motivational factors and reasons for attending college are difficult to measure and not particularly predictive of persistence. Although differences in personality traits have been found between persisters and withdrawals, with negative characteristics dominating for the withdrawal group, such factors are difficult to assess. They may reflect more about the faculty and the institution than about the individual factors in persistence. One can understand why nonconforming, unconventional, or authority-questioning students find some college environments intolerable, and conversely. Yet there is surely some question as to whether such traits should be involved in attempts either to retain or explain students or to explain their departure. Such traits might be relevant to the original selection and admission process, although undue restrictions on personality traits savor of discrimination and suggest a degree of homogeneity in views not conducive to a liberal education.

There are a number of characteristics that are (and reasonably should be) related to persistence. The high school grade point average and class rank are still the strongest predictors of college performance and of persistence and attrition. Measures of scholastic aptitudes show distinct group differences between dropouts and persisters. Nevertheless, the use of these variables in predicting college persistence has not yielded definitive results useful in identifying in advance individuals who may discontinue. First semester college grades are clearly and for obvious reasons related to persistence. Students with unsatisfactory grades (personal or institutional) become discouraged. Scholarship or parental support may be lost. Students with certain career interests, such as medicine, which depends for entry upon high grades, know that merely satisfactory grades are unacceptable.

A few researchers commenting on the role of college grades have toyed with the idea that raising grades might improve retention. The experiences of the late '60s in which, as a result of student activism and faculty sympathies with it, virtual destruction of standards and requirements occurred in many institutions accompanied by a marked decrease in low grades and a highly suspicious increase in top level grades has nowhere been reported as markedly increasing retention rates, although there may have been instances in which this has happened. We would be inclined to assume, first, that most students are sufficiently intelligent to discern whether they are acquiring a significant education altogether apart from the grades which they receive and, second, that soft grading practices reflect on the part of the faculty a lack of clear objectives and of criteria for determining achievement. Furthermore, if every student has excellent grades, grades become meaningless and hence useless in providing satisfaction or indicating progress.

In many cases where differences are found between persisters and nonpersisters, the use of the findings may be dubious and even inequitable. An example of this has already been noted with regard to personality. Astin (1973) found that Jewish students were more likely to graduate in four years than are non-Jewish students. He also found that Chicanos were less likely to graduate. Although these findings provide bits of evidence that could be used by a college to improve retention rates, there are obvious reasons why an institution might hestitate to take the indicated action or admit to it if they had used it. There are numerous less discriminatory factors associated with particular programs that exhibit different rates of incidence among persisting and nonpersisting students. Astin (1975b), in Preventing Students from Dropping Out, for example, reports that a student's chances of staying in college seem to be enhanced by involvement in social fraternities or sororities and participation in varsity athletics. However the fact that the percentage of students involved in social fraternities or sororities who persist to a degree is somewhat greater than the percent of noninvolved students who persist to a degree does not establish a causal relationship; quite likely, the two groups are composed of distinctly different types of students. For example, the financial considerations involved in membership in social organizations may have more to do with persistence than does membership itself. Students who are uncertain about their continuance in college are not as likely to join (or even be asked to join) fraternities.

Higher education owes Astin and his associates a debt of gratitude for what are probably the most extensive studies that have ever been made of retention. Commendably, the attempt has been made to move from data to concrete recommendations and actions that might increase persistence. But the relationships found are, in many cases, rather more complex and ambiguous than the analysis admits. In what follows, we briefly take exception to several suggestions and conjectures so as to indicate the indefinite nature of most of the findings.

Astin provides evidence that students living in residence halls exhibit a higher rate of persistence than do students who live at home. He even carries this to the point of suggesting that local students are treated unfairly when they are denied a place in the residence hall. The cost of residence hall living for an individual who already resides in the vicinity of a college is a deterrent not easily overcome. For some students, living at home is more conducive to a successful college experience than is any type of campus living experience. Furthermore, residence hall living for an individual whose family resides in the immediate community is inevitably different from that of students who are far removed from family; possible tensions generated by such differences can lead to discontinuance or transfer to another institution at a distance.

Similarly, Astin notes that students involved in varsity athletics show a higher rate of persistence than do students not so involved. Varsity athletes in most institutions represent a distinctive group in terms of financial aid and other types of support. The first year, in most cases, is an investment in participation in later years. The able athlete who would withdraw will find both active discouragement and various proffers of assistance, including special tutoring and careful selection of professors. Furthermore, in some institutions the rate of persistence of athletes to a degree is disgraceful despite the aids and pressures provided.

Astin also points to participation in honors programs and credit by examination as affecting favorably student persistence. It is readily to be expected that students who have participated in honors programs and students who have received credit by examination will show greater persistence rates than those that do not. In part, this is a matter of the individual attention provided, but one who has been involved in these programs will certainly be aware that it is largely those students who already have a high rate of expectation of finishing college who take advantage of credit by examination and who are encouraged or sought for honors programs. Indeed, in many colleges, honors programs are not available until the junior year, with the prior two years of persistence already establishing the major distinction between persisters and nonpersisters. In any case, placing all students in an honors program is unlikely to be effective. In his commendable desire to turn what is often artifactual information into a basis for action, Astin (1975b) makes statements such as the following:

> Participation in varsity athletics reduces chances of dropping out by 1 percent for white men and 5 percent for white women and blacks in white colleges. Membership in fraternities or sororities is associated with even further reductions, from 6 to 9 percent for all groups. . . . Students concerned about maximizing their chances of finishing college should seriously consider leaving home and living in a college dormitory. (p. 107)
>
> Students maximize their chances [of completing college] by attending a private university in any region or a public four-year college located in the northeastern or southern states. They minimize their chances by attending a two-year institution. (p. 126)
>
> After examining the fit between student and institution, it appears that in general, persistence is enhanced if the student attends an institution in which the social backgrounds of other students resemble his or her own social background. (p. 144)
>
> Student orientation sessions can be utilized in at least two ways to reduce attrition rates. First, students can be familiarized with the findings of this study and the factors in their background and in environment which affect their dropout changes (where they live, whether they hold a job, whether they marry, and so forth). Providing students with such information would better enable them to elect environmental options that would help them complete college. (p. 152)

Astin has also developed elaborate worksheets which an institution or a student can use to estimate dropout promise. He notes that one application of such survey data would be to calculate expected dropout rates for any class of entering students as a basis for adjusting recruiting efforts. Astin (1975b, p. 153) also suggests that "If the survey indicated a significant decline in dropout-proneness for a new group of incoming students, this information too would be useful in planning facilities and revising enrollment projections." These are useful and justifiable suggestions primarily because they apply to a group rather than require identification of individuals.

However we find great difficulties with many of those analyses and recommendations by Astin and others which suggest that persistence rates will be increased by encouraging or forcing individual students to take on characteristics more common among persisting students. Statements that indicate that a student's chances of finishing college can be improved by behavior more common among persistent students represents complete misunderstanding of the nature of probability and prediction. Elsewhere Astin (1975b, p. 151) wisely notes:

> The ability to predict dropping out is still extremely limited. Using all of the best predictive variables from this study as admissions criteria would make possibly only a moderate improvement in predictive accuracy. Thus, a substantial proportion of the most dropout-prone students admitted would complete their program and a small but significant number of the least dropout-prone students would not finish theirs. In short, institutions can be much more flexible in their selective admissions without fear that dropout rates will be unduly influenced.

This is good advice, although not very helpful to a college largely dependent for its enrollment on individuals who select the college. The commentary might well have added that advance identification of those students who are likely to drop out will always be extremely hazardous and desirably so.

Another factor complicating prediction is that faculty members tend to adjust their grading to the students they face rather than maintain fixed standards. There is a tendency to impose a fixed grade distribution on a class regardless of ability.

Elsewhere Astin (1975b, p. 170) states that two probabilities can be computed on each student from the worksheets provided. He further remarks that "These probabilities, of course, are merely estimates; each student's unique situation may substantially alter the estimate." In fact, these estimates are not probabilities for individuals but rather for a group of individuals. An individual either persists or does not persist, and the individual, counselors, parents, and others (again as Astin suggests elsewhere) can only intuit the various factors involved and act accordingly. It would be nice indeed if one could identify the individuals who might but should not withdraw and work out procedures to prevent them from doing so. The judgment, however, of who should not withdraw involves, on one hand, a value judgment and, on the other, omniscience and infallibility in prediction of future events. For example, a nationally known college basketball player recently discontinued his education after two years and is now reasonably assured of a multimillion dollar professional career. His professed intent of completing college at some point in time has undoubtedly gone by the basketball boards. No one, perhaps least of all the individual himself, is capable of judging whether or not he should have persisted.

Astin (1975b) and Ramist (1981) have suggested that persistence is enhanced if a student attends an institution in which the social backgrounds of other students resemble his or her own social background. It is quite possible that selection of students so that existing beliefs and prejudices are supported and reinforced rather than challenged in college may indeed increase persistence. On the other hand, the acquisition of a liberal education requires the interaction of an individual with others with differing experiences, beliefs, and values as a means to encourage reexamination of one's own beliefs and purposes. Any institution should be wary of an admissions pattern that brings in students and faculty who engage in mutual admiration of their existing commitments. A high persistence rate is desirable in some respects, but it must not become a goal, even if justified in terms of assuring the continuing existence of an institution.

A number of researchers (Astin, Pantages and Creedon, Cope, Lenning, Beal and Sauer, Pascarella and Terenzini, and Ramist) have emphasized the interaction of faculty and students as a significant element in retention. It should be remembered, however, that faculty members have not selected careers as ministers, social workers, directors of youth organizations, or student activity coordinators;

rather, their excellence lies in their scholarship and perhaps in their ability to help others to learn. If they perform effectively in this manner, they will certainly encourage persistence. If faculty members attempt to relate with students in situations in which they (the faculty) are incompetent or inappropriate models, the effects could be negative, not only on their own productivity, but on the students as well. In any case, it is necessary to remind ourselves continually that results on groups provide limited or no information about how to deal with individuals and that any attempt at introducing new factors designed to retain students will, on one hand, have differential effects on the various students and may, on the other, if the resources required are extensive, detract from other features of an institution's program that are significant in encouraging persistence.

Institutional Environment

Pantages and Creedon (1975, p. 80) state that "The degree to which the attitudes and values of the student correspond with those of the institution is also the degree to which the student is likely to persist at that institution." This statement is an example of the ambiguous language and statistics often used in discussion of retention. What is "the degree" as here used? What is the basis for measuring attitudes and values and for asserting that measure is also the measure of "likely to persist"? Undoubtedly, as Pantages and Creedon (1978, p. 75) assert elsewhere, ". . . college environment plays a major role in persistence or withdrawal . . .," but the relationship is uncertain and is of no use in identifying in advance an individual who will withdraw. In fact, a sociological version of the Heisenberg Uncertainty Principle may be in effect here in that the very attempt to label someone as a potential dropout may cause a change in behavior that would not have otherwise occurred. Even if the relationship were positive, no information is available as to the resulting educational benefit or personal detriment if a would-be dropout were persuaded to remain.

The processes of social and academic integration are part of the environmental impact. In large institutions, there are many different environments. Even within a small liberal arts college, distinctive environments are provided by residence halls, fraternities and sororities, rooms in private homes, and living at home. Academic programs and majors also provide differing environments. Environmental homogeneity is never absolute and would be boring and probably conducive to withdrawal if it were. To some extent, an individual seeks and hopefully finds a reasonably congenial environment such that personal idiosyncrasies are both accepted and titillated.

Attempts such as those of Spady (1970) and Tinto (1975) to develop models of college dropout based heavily upon the degree of social and academic integration assume the reality of a "college fit." They provide some insight into the problem but offer no help in solving it. Incidentally, one might also argue that a college education should assist individuals in adjusting to a new environment or adapting it to oneself. Apparently, if environments and socialization are major factors in withdrawal, colleges are not very effective instruments of socialization. Perhaps we should admit that few colleges were primarily intended to be that, even though education obviously affects the attitudes and socialization of individuals in respects neither entirely predictable nor necessarily desirable. One thing is clear: high prestige institutions have the high retention rates. We suspect that undergraduate program quality has little to do with this.

Reasons for Attending a Particular Institution

The many studies that have been made of student persistence show a great variety of factors operating in choice of an institution. Viewed from the concern for persistence, there is a tendency for administrators to seek for ways to achieve commitment or involvement of the individual in the institution and its activities to such extent that discontinuance is unlikely. This may work for a few students, but a more careful analysis of factors involved in attending a particular institution suggests that there are elements involved in this approach that raise doubts about exploiting involvement as a means to prevent the dropout of college students. The following analysis draws upon many studies but, in its specifics, corresponds to none of them.

One factor in selecting an institution may be that simply of chance, convenience, or contiguity. A person who lives in the immediate community of an educational institution or on a major highway or railroad line that provides quick and convenient travel to an institution may be regarded as selecting the institution primarily for personal convenience. This may also be regarded as a chance factor in the sense that the individual just happens to be within easy commuting distance of the institution. The individual may have little or no commitment to the institution and may never become much involved with it. The institution simply provides a convenient place to take certain courses or complete a degree program. Convenience may even transcend any individual preferences with regard to programs or courses. An individual might have an aspiration to study Russian, for example, but, not finding Russian available in the most conveniently available institution, foregoes--at least for the time being--that particular aspiration in favor of studying Greek or something else which is available. The senior author recalls a woman explaining her presence in an admittedly inappropriate evening course by explaining that it was the only time she had free. Undoubtedly, community colleges provide copious examples of individuals taking courses just because the course and the college are there. Unless the college demonstrates that it offers something valuable and unique for an individual, it is unlikely that an individual's commitment to the institution will ever be very extensive.

Opportunity for independent study at home averting frequent travel to the campus, recognition of individual talent or interest, and a bid for the involvement of the individual in the institution--possibly by depth interviews and planning with regard to a career or by providing assistance in finding full- or part-time work--are suggestive of institutional activities that might move an individual beyond regarding the institution as a convenient place to take courses to viewing it as an institution and collection of individuals not only interested in but willing to assist "me" in every way.

An institution that caters to convenience by offering its courses in a variety of localities risks becoming regarded as an opportunistic purveyor of educational services. Such an institution may have to weigh its motivations in providing educational opportunity to its various clienteles. A purely social service orientation might suggest that an institution attempt to assess educational needs and provide them to whatever extent it can, either out of immediately available resources or by raising additional resources for that purpose. Community funds supporting a variety of social services in the community have this character. There is no expectation that each of the individuals aided develop an affection for the Community Chest or United Fund, but there is a hope that the provision of needed and effective services will engender in the community a respect for the Fund and a willingness to contribute to its continuance. In contrast, an institution that sets up programs in a variety of locations to attract individuals may be favorably regarded for making educational facilities convenient, but may also be recognized as being motivated primarily by seeking a return on these programs that will help to ensure the continued existence of the institution.

A second consideration leading a student to enroll in an institution is a personal or family commitment--possibly through a church or other organizational connections. Colleges affiliated with various denominations frequently maintain contact with individuals through church bulletins, special mailings, and commitments of ministers to the institution. Thereby the name of the institution becomes familiar to prospective students. As a result, the institution is singled out from others. With so many colleges and universities being available, this limited commitment and continued familiarity may be the basis for a particular choice. In the case of some prestigious, long-established institutions, several generations may have attended the college or university so that it becomes a family tradition to attend Harvard, Yale, Princeton, Brown, or Amherst. To some extent also the worldwide reputation of these institutions generates something of a snob appeal in which the institutional tie has significance altogether apart from specific issues of program availability and quality. Put more simply, degrees from certain prestigious institutions are worth thousands of dollars in the job market.

A third factor in selecting an institution is the nature of the program offered. An individual who seeks to become a nurse knows full well that attainment of this career requires admission to an institution that provides a program in nursing. However, aside from specific undergraduate programs that have immediate professional or vocational implications, selection of a college by the availability or attractiveness of a particular degree, major, or program may be much more limited than many college admissions officers seem to believe. There is a tendency to develop brochures and catalog statements that expand at some length on the unique features of the particular program. Such matters as credit by examination, double and triple majors, and interdisciplinary programs can be made to sound very attractive when, in fact, the actual availability of these programs to students is limited. The likelihood is that only a few students are attracted by some of these features. It is the unusual student in any college that would expect to acquire many credits by taking examinations. Hence unless colleges begin to vie with each other as to how many credits they will grant to an individual by some evaluation procedure prior to enrollment, it is unlikely that this and other similar features will play a major role in attracting students to a college.

Attempts to attract students by highlighting particular majors may be effective in some cases. This is especially true in speech, drama, or music departments where programs sponsored by these departments or individuals in them may become widely known and therefore effective in attracting students. Insofar as attracting students by the uniqueness of various educational programs, there is likely to be some risk resulting from overdramatization of the possibilities to the extent that the descriptions are unrealistic, if not dishonest. Moreover, the sheer pressures of scheduling classes and carrying out teaching responsibilities frequently mean that the unique aspects of a program as dramatized become, in fact, available to a relatively few students. Independent study is a good example. Disparity between promise and actual opportunity can engender the disillusionment and departure of some students.

There is also some risk in using preprofessional programs as the basis for attracting students if the institution hopes to receive alumni contributions after graduation. The graduate who goes into a medical or law school on a university campus may maintain primary interest in that professional school. Likewise, students in programs in nursing, medical technology, and business are more likely to retain a commitment to those units or programs than to the institution as a whole. Interest in a technical or professional career may develop an orientation toward continued study at the graduate level and may cause a student, even as an undergraduate, to transfer to another institution where this education is available. Admissions officers who use the career and major emphasis to attract students may well contribute to student dissatisfaction and ultimate withdrawal in an institution heavily committed to a liberal education emphasis.

A fourth factor in bringing an individual to the campus is that of recruiting. When recruiting goes beyond the simple provision of factual information about the institution and its program to the consideration of various forms of financial aid, granting of special status, or other factors, recruiting becomes a means of influencing choice, perhaps even of changing it. In one institution that made special efforts over a period of time to attract extremely able students, many of these students became somewhat unhappy because the reality was less than the vision presented. Thus, though these individuals, because of other tangible advantages, remained, their attitude and commitment to the institution were, in some cases, much different than hoped. Institutional commitment cannot be bought, although persistence can be.

Interest in Persistence

Our survey of interest in persistence included information on the centers of interest in the problem. A counting and classification of offices and individuals reported as interested and involved in study of or action on retention problems provides some indication of the nature and difficulty of the task. The following tabulation resulted:

1.	Central administration (president, vice presidents, and assistants)	48
2.	Student services (counselors, student affairs personnel, minority affairs personnel)	39
3.	Admissions and registration	27
4.	Faculty and instructional departments	26
5.	Academic administration (deans, assistant deans)	22
6.	Research (committees, institutional research)	10

This tabulation reveals that central administration and student services personnel predominate in discussions and activities related to persistence. Since retention has major implications for budget, student activities, and residence hall operations, this is not surprising. On the other hand, if one believes that the character and quality of an institution's academic program are the justification for its existence and also suspects that academic program deficiencies are major factors in retention, then the lack of extensive departmental and faculty involvement in study of retention or in curriculum and of instructional alterations to improve retention is perhaps symptomatic of the problems of retention and the ineffectiveness of many measures taken to relieve them. Certainly one of the principal concerns of any attention to increasing student persistence should be the arousal of concern about it on the part of all of those persons who interact with students.

It is likely that the evidence of administrative concern about student withdrawal from college will generate some concern and change in behavior on the part of residence hall personnel and counselors. A few students who might have withdrawn may be identified and prevailed upon to stay by this personnel staff. The concern and possible increase in personal contacts with unhappy students will attain this result without anyone, even the students, being aware of the effort. Faculty members are not usually quite as responsive because they are primarily interested in junior and senior majors where dropouts are least apparent, and they may view curricula or instructional modifications to increase retention as academically peripheral and as savoring of coddling and reduction of standards.

Special counseling, tutorial programs, and other add-ons that are often expensive efforts represent a second and more obvious effort to reduce attrition. Our own experiences at MSU, dating back over a number of years during which various approaches were tried to assist students in adjusting to and remaining in college, suggest that such add-on programs not only require considerable expenditure but also frequently involve intensive effort of individuals who have previously been excellent in maintaining broad student contacts. Both of these factors tend to undermine the persistence characteristics of the basic program in which most students are involved. Experiences also indicate that the persistence gained by these extra procedures is limited to a term or two rather than to the completion of degree requirements.

Summary

Our conviction, after reviewing the extensive work on persistence and retention, was that we should focus our attention on the academic program and insist that faculty and academic units involving faculty cease the pattern of developing degrees and programs around their own experiences, convictions, and prejudices and turn to the development of educational programs that are flexibly adjustable to the interests and needs of students and that are organized and taught in such manner as to promote understanding, integration of knowledge, and the development of ability to learn through one's own efforts. In such circumstances, programs would necessarily take on more characteristics of continuity, sequence, and integration than is presently true in many colleges, thereby yielding a sense of achievement and progress that should encourage students to remain. Though administrators recognize this need, faculty members may not, and they do resist administrative pressures for program change.

Intermittent attendance or discontinuance of one's education will still happen. Indeed, this is consistent with the present concern about lifelong education and career change. But educational programs designed in such manner that, rather than being bored, the majority of students find challenge and relevance in their experience would tend to encourage those individuals who, for one reason or another, have discontinued their education to resume it on a part- or full-time basis when opportunity was provided. Furthermore, we need to focus much more attention on developing a career orientation, purpose, and motivation on the part of individual students and accept changes, be it transfer to other institutions or change of program within an institution, as natural and desirable events associated with the clarification by individuals of what they wish to do with their lives.

There will remain a few institutions to which students go and persist and acquire a degree in a standard time--perhaps more because of the reputation and the potential career implications of a degree from the institution than because of program quality. Other institutions must accept the fact that an individual short of a degree by two or three credits or an individual with only one or two years of work may nevertheless have received an excellent and useful education. For many of these individuals, our efforts perhaps should be directed to enabling them, if they wish, to acquire the necessary experiences, insights, knowledge, and credits to achieve a degree without particular concern about the institution which grants it. In brief, we are suggesting that concern about retention has, to a large extent, been oriented to institutional needs and aspirations rather than to individuals and that relatively few institutions are justified in thinking that they provide a unique integrated education such that nothing less than the full package is worthy of recognition. We are also suggesting that most colleges and universities must justify their existence and encourage student persistence through the quality of the experience provided and the demonstration of the results achieved. Measures taken to increase student persistence that are irrelevant to or even detract from the quality of the education received by an individual are basically dishonest and unworthy of an institution of higher education. Furthermore, for those institutions that wish to analyze their own effectiveness in providing a significant education to students, the effort should be directed to determining the extent to which students enrolled in the institution have successfully achieved some goal or objective important to them, and that may be far less than a degree.

The major or program in which a student is enrolled is the most significant aspect of formal education, provided that the program corresponds with student interests and aspirations. The department or college and the faculty involved are the most significant factors in providing the experiences that arouse motivation and student interest and provide assurance that continuation is worthwhile. Hence we turn our attention in the following chapter to the role of major or program in student persistence.

Chapter Three

Degree Persistence by Major and Program

An educational program is a sequence of planned cumulative experiences that assist an individual in developing: value-based insights and understandings, competencies in expressing, relating, and applying these in life, and potential for further growth in understanding of and in commitment to worthy and significant personal and social goals. A general education is an essential but inseparable component of any educational program that is intended to produce individuals capable of applying and adapting their knowledge, skills, understandings, and insights to a humane, equitable resolution of the personal, social, economic, and political issues of the day. Consonant with this conception of education, any study of retention in an educational institution must be concerned with consideration of the extent to which the programs offered provide students with appropriate experiences and also make apparent to them the worth of these experiences by providing evidence of their relevance to progress in reference to the predicated goals. Jails can and do retain individuals without improving them, but an educational institution must move beyond concerns for retention to provision of educational experiences such that their intrinsic worth and extrinsic relevance to life stimulates the individual to persist in educational efforts. Program certificates and degrees are meaningful only if they assure the recipient and those who seek his or her services that some minimal level of accomplishment has been achieved.

In the modern college or university, the unit responsible for the quality and integrity of a program is the major department, school, or college responsible for definition of the experiences provided, requirements specified, objectives sought, and goals achieved. Students both seek and are required to find a major or program with which to identify, and their certificates or diplomas specify that major or program. Accordingly, student persistence must be examined in relation to program. The institution, the individual student, and the program (curriculum and faculty) must be considered with the following possibilities in mind:

- The individual is in an inappropriate program in part perhaps because the institution does not provide adequate assistance in or opportunity for program selection.
- The program is unattractive, ineffective, or overspecialized for many prospective students.

Studies of persistence conducted with these possibilities in mind will raise questions and perhaps have immediate implications for academic program evaluation and planning.

Review of data provided by a number of institutions suggests that the major or degree program and the personnel involved in its operation and direction play a more significant role in student persistence than has generally been recognized. Accordingly, various modes of analysis have been explored to develop a procedure that might uniformly be applied by any college or university in a study of the relationship between initial choices, changes, and completion of program requirements. Inevitably, difficulties arise. Some colleges do not require or may not even permit a formal choice at entry. Most institutions, however, have at least a preference indication from entering students. Transfer students from other institutions also pose some problems. These and other difficulties will be discussed later and in more detail. For the most part, the discussion proceeds on the assumption that each entering student indicates a major or program choice at entry. At the time of departure from the institution (whether by dropout, transfer, or graduation) each student is enrolled in a major or program which may or may not be that originally indicated. Intervening changes between the initial choice and last recorded one are ignored in this analysis because they unduly complicate the process, although the number of students with multiple changes may be surprisingly large--one institution reports that 29 percent of their 1981 graduates had more than one major change.

Some researchers feel that the intervening changes in major are, if anything, more indicative of student dissatisfaction than the first major change, the reason being that the first switch reflects only the correction of a freshman's uninformed and unrealistic initial choice of a major whereas later changes express the disappointment of an experienced student. Researchers holding such an opinion may wish to somehow include multiple changes of majors in their studies in spite of the technical complications that ensue.

Initial Major or Program Selections

Initial major selections by students involve selection of an institution and selection of a college, program, or major within that institution. Some institutions permit students to enter without a major indicating them as "no preference" or "undecided." Some vocational or professional colleges within universities use a "general program" designation for all students and approve specific program or major choices only after completion of certain courses, perhaps with a specified average grade. These categories of no preference, undecided, or general program are effectively initial choices that require at least one change into a major in which degrees are awarded and, in these cases, perhaps the researcher would choose to disregard the _first_ major change since it carries little or no significance. Some liberal arts colleges--either free-standing or university-based--initially permit divisional choices (humanities, social sciences, fine arts, natural sciences) and may offer also degree programs in these broader areas. Any of these patterns can be accommodated in the following discussion. If no initial selection is permitted, that in itself may be a significant contribution to dropouts among those students who are unable to relate their educational experiences to any personal aspirations.

Our view, buttressed by extensive experience and some data, is that most students have at least one or more tentative career choices in mind and view the college experience as assisting both in the process of choice and in preparation for attaining it. We believe this is a reasonable expectation and hence urge that attention be given to assessing the impact of the educational program and associated experiences on individual student career planning. Choice of an immediate major or program is an essential part of this, but the extent and nature of the resources available to facilitate career planning are surely more important than the immediate choice since the latter may be modified or altered as the individual develops or as societal and technological innovations require.

Changing Majors. The faculty and administrative attitude toward student program changes and the administrative procedures required in making them are undoubtedly related to the number of changes taking place and the characteristics of the individuals who would change. Program unit personnel (whether faculty or administrators) generally are reluctant to lose students, especially good ones. Hence subtle means of discouragement are used when students would initiate a change. "why don't you try another term or two," "wait until the end of the year," "talk to someone (adviser, counselor, dean, chairperson, or others) before deciding." No unit wants the weak or failing student from other programs even though counselors might contend that the student made an inappropriate initial choice, was given poor advice, or was actually treated unfairly or inappropriately in course enrollments or grades.

Changes in major that require a student to initiate the process with a major adviser may cause the timid or uncertain individual to defer change or withdraw from college rather than risk a confrontation. Procedures requiring multiple signatures (and hence multiple explanations) may be time consuming, productive of delay, and conducive to unpleasant experiences. Initiation of and perhaps even authorization for a change from a central unbiased source could remove some of the difficulties and delay in major change when only routine is involved. After several terms of enrollment, major or program changes are likely to require decisions about the acceptability for a degree of courses already taken and the makeup of required courses and prerequisites. The decisions made may lengthen the time required to complete degree requirements and thereby increase educational costs. These decisions may require a formal review and approval by one or more individuals or a committee. Face-to-face contact and extensive discussions are sometimes required so that the student may become discouraged in the process. Indeed, change procedures often seem to be fabricated so as to cause delay and discomfort. Even the transfer of a student's folder from one functionary to another can involve a delay of a week or two. Personalities, requirements, convenience, and a hidden agenda of power balancing often play more critical roles in academic structures than does student career concern.

Available Options. The options available to a student in initial program selection or in making a program change are extensive. A disciplinary department may offer several majors: teaching of mathematics, applied mathematics, pure mathematics (probably oriented to graduate study), computer science, and statistics and probability. In some colleges, various emphases of this sort may exist within a department, although not formally recognized as distinctive majors. Minors or collateral studies conjoined with majors provide a way of developing a distinctive career orientation. Double or even triple majors are permitted in some colleges as are interdisciplinary and individualized majors.

Generally, the students enrolled in them are few in number, although some interdisciplinary programs (area studies, urban studies, environmental studies) become firmly embedded in the curriculum and are formally recognized as equivalent to traditional departmental majors. Formal identification of these alternatives in catalogs and on student records can lead to so much paper work that their use is discouraged.

Major changes, when both majors are in the same unit (college, school, division, or department) are usually less troublesome for students than changes to another college or program since the same general policies operate and only the one unit administrator is involved. However, even in liberal arts colleges, changes from one major division to another (humanities to science or science to business) may involve as close a scrutiny of student and program by several persons as occurs in a university where humanities, science, and business appear as three separate colleges.

Changes from one college or professional program to another generally, but not always, involve a significant alteration of career interests. A student majoring in some aspect of agriculture in the college of agriculture may have to transfer to the college of education to major in agricultural education or possibly become a joint major of both colleges. At some universities, a student wishing to major in economics may do so either in the college of business or in the college of social sciences. Institutional academic structures are not so planned as to ease student search for a career program. A change in college or major does not necessarily reflect a fundamental change in student plans. For example, our "pre-journalism" students start in arts and sciences and seek admission as juniors to the school of journalism. For those admitted, this is recorded as a change in school and major, although for most of these students no change in intent really took place.

This all points up how important it is to have someone who is very familiar with the institution's programs review the final report or, even better, provide advice when the data gathering methodology for a study of persistence is being developed. Such a person can decide if certain major changes should be ignored--that is, a change from a freshman general program or "no preference" status to a major, a change from a preprofessional program (pre-engineering, pre-nursing) into the program as a junior.

Transfers. Students changing from one institution to another present special problems in relating major choice to degree completion. For some students, transfer to another institution may be a prime consideration for personal, family, or program-related reasons. These students seek to build a program for transfer rather than to meet requirements in the initial institution. Commitment to the immediate institution per se may then be nonexistent so that dissatisfaction with major, rules and policies, residence, or a perceived lack of challenge and relevance conjoined with external problems and commitments can lead to withdrawal or earlier than planned transfer.

The interinstitutional transfer student also faces some problems in the institution to which he or she transfers. This is evident in the fact that most of the institutions studying retention concentrate on the entering freshmen and either ignore or treat the transfers separately. Yet transfers furnish a sizable segment of the enrollment and fill in the gaps caused by withdrawals from the original entry group. There is also evidence that in-transfers (probably because they are initially closer to program completion) show a higher rate of persistence to a degree than do the entering freshmen. Institutions with very high rates (75% or more) of retention to a degree may prefer to focus on original freshman admissions rather than upon the in-transfer students. Indeed, some selective high persistence colleges admit no transfers. Other colleges with significant numbers of in-transfers may find it advantageous to conduct retention studies by follow-through of all students entering in a specified term or year. This approach is further supported by the fact that acceleration by full-year attendance, extra loads, and credit by examination are increasingly permitting some students to graduate in less than four years. Considering the high attrition from the freshman to the sophomore year (30% or more) and the relatively high retention of junior and senior transfers, some institutions with large transfer enrollments may find that the mean student years* of transfers equals or even exceeds that of a typical native freshman cohort. At the same time, intermittent attendance and part time loads result in numerous students taking more than four years to complete degree requirements. General recognition of this in study of retention will also tend to focus attention on policies, rules, and requirements that presently favor a four-year continuous residency. The analysis suggested here is predicated upon a follow through of individuals to program completion rather than to a four-year class-based study, but it can also be used for the latter.

Analysis of Program Choices and Changes

A complete analysis of student program choices and changes would include an accounting for each of several choices or changes at each of the several unit levels, including department or program, division or college, institution. The possible choices or changes are:

- entry choice--that major or program selected by the student at initial enrollment
- change of major or emphasis within department or program
- change of major or emphasis within the original college
- a change from a major in one college to a major (usually but not necessarily different) in another college

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*Mean student years = $\Sigma \frac{\text{student x years attended}}{\text{no. of students}}$

- transfer to another institution--may only be surmised by issuance of transcripts, history thereafter usually unknown
- dropout--often a temporary characterization since student may return at a later date or may already have enrolled elsewhere
- stopout--either with a formal leave of absence or as an intended temporary dropout
- no change--maintained original major and college from entry to withdrawal or graduation

A complete analysis of major or program changes at the lowest unit level (usually the discipline or department) would then include:

(1) Entry enrollment in the unit, n_1

(2) Dropouts, n_2

(3) Transfers to other institutions, n_3

(4) Changes to other colleges, same institution, n_4

(5) Changes to other majors, same college, n_5

(6) Changes to other majors, same department, n_6

(7) Retained original major, department, and college, n_7

(8) Changes from other majors, same department, n_8

(9) Changes from other majors, same college, n_9

(10) Changes from other colleges, same institution, n_{10}

(11) Transfers from other institutions, n_{11}

(12) Adjusted enrollment in the unit, n_{12}

Let n_2 to n_{12} represent the numbers of students in each of these groups at the end of the period over which persistence is studied. Any classification (changes to other colleges (4), for example) contains all students whose final choice at dropout or graduation shows change (regardless of date) from the original to another college in which the student was enrolled at the time of departure. Intermediate changes are disregarded. If an individual made a change but prior to discontinuance or acquiring a degree returned to his or her original major and college, he or she would be counted in "retained original major." Then $n_1 = n_2 + n_3 + n_4 + n_5 + n_6 + n_7$.

Also, $n_{12} = n_7 + n_8 + n_9 + n_{10} + n_{11}$.

Those students (n_7) retaining their original major are counted in both entry and adjusted enrollments.

Let N_1, N_2 to N_{12} represent the number of students in each of these groups 1-12 that graduate at the end of the period over which persistence is studied. The division of the capital letter by the corresponding small letter $\frac{N_1}{n_1}$, $\frac{N_7}{n_7}$, and so forth, will then indicate the percent of each category of individuals that receives a degree somewhere in the institution.

This complete accounting for an original entry group over a specified period is seldom, if ever, possible. Dropouts (2) and transfers to other institutions (3) cannot be readily separated. The later degree status of out-transfers is not usually known. Accordingly, (2) and (3) can be omitted from the analysis and, in so doing, the capital letters (N) refer thereafter only to degrees granted in the institution under study. If the distinctions among alternative majors within a department are deemed of little interest, (6) and (8) can be eliminated. If transfers from other institutions (11) are included in (1) in the initial term or year of entry, or analyzed in a separate study dealing only with transfers, then (11) disappears. The modified analysis is as indicated in Table 2. Note that the letters a-g and A-G designate the number of students in the various categories.

Table 2

Analysis of a Major, Department, or Program

	No.	% Entry Enroll.	% Adj. Enroll.	No. Grad.	% Grad.
Entry enrollment	a	100		A	100A/a
To other colleges, same institution	b	100b/a		B	100B/b
To other majors, same college	c	100c/a		C	100C/c
Retained entry major	d	100d/a	100d/g	D	100D/d
From other majors, same college	e		100e/g	E	100E/e
From other colleges	f		100f/g	F	100F/f
Adjusted enrollment	g		100	G	100G/g

Notes:

1. Comparisons among the percentages of graduates in the several categories permit consideration of the impact of various types of changes on graduation. For example:

   100A/a is the percent of the original entry majors receiving a degree somewhere in the institution in the period under study,

   100G/g is the graduation percent for all students who selected this program as their final major.

   100D/d is the graduation percentage for students who attained a degree in their entry major.

2. Column 2 (% Entry Enrollment) indicates the dispersion of Entry Enrollment. Column 3 (% Adjusted Enrollment) indicates the percent of the final enrollment coming from various sources.

3. 100 d/a can be considered as an index of major retention for students retaining, whether or not completing it, their original major.

4. 100 (e + f)/g can be considered as an index of the importance of student changes in a major--the percent of the adjusted enrollment derived from college and major changes.

5. 100 g/a can be considered as an index of enrollment stability for the major. An index of 100% indicates stability, although the adjusted enrollment would not necessarily include any of the entry majors.

Table 3 indicates the analysis for a college. This analysis can be prepared for each data element except c' in Table 3 by summing across all majors (departments) within the college.

Table 3

Analysis of a College

	No.	% Entry Enroll.	% Adj. Enroll.	No. Grad.	% Grad.
Entry enrollment	$a' = \Sigma a$	100		$A' = \Sigma A$	$100A'/a'$
To other colleges	$b' = \Sigma b$	$100b'/a'$		$B' = \Sigma B$	$100B'/b'$
Retained entry College:	$c' = d' + e'$	$100c'/a'$	$100c'/g'$	$C' = D' + E'$	$100C'/c'$
entry major	$d' = \Sigma d$	$100d'/g'$	$100d'/g'$	$D' = \Sigma D$	$100D'/d'$
other major	$e' = \Sigma e$	$100d'/a'$	$100e'/g'$	$E' = \Sigma E$	$100E'/e'$
From other colleges	$f' = \Sigma f$		$100f'/g'$	$F' = \Sigma F$	$100F'/f'$
Adjusted enrollment	$g' = \Sigma g$		100	$G' = \Sigma G$	$100G'/g'$

Notes:

1. $\Sigma c = \Sigma e$ and $\Sigma C = \Sigma E$. (Major changes into and out of other majors within the same college must be equal.)
2. $c' = d' + e'$ and $C' = D' + E'$. (College retention is the sum of students maintaining original major and of students changing majors in the college.)
3. $100c'/a'$ = percent of entry choice remaining in college.
4. $100c'/C'$percent of those retaining entry college that graduate from it.
5. $100d'/a'$ = percent retaining entry major.
6. $100D'/d'$ = percent retaining entry major and graduating in that major.
7. $100c'/a'$ can be considered as an index of college retention.
8. $100f'/g'$ can be considered as an index of the importance of changes into the college from other colleges, as a percentage of the adjusted enrollment.
9. $100g'/a'$ can be considered as an index of enrollment stability for a college.

The analysis for the institution is indicated in Table 4. This analysis can be prepared by summing across all colleges in Table 3, recalling that the sums of changes to other colleges and changes from other colleges must be equal (that is, $\Sigma b' = \Sigma f' = b''$

Table 4

Analysis of an Institution

	Number	% Entry Enroll.	No. Grad.	% Grad.
Entry enrollment	$a'' = \Sigma a'$	100	$A'' = \Sigma A'$	$100A''/a''$
Changed colleges	$b'' = \Sigma b'$	$100b''/a''$	$B'' = \Sigma B'$	$100B''/b''$
Retained entry college	$c'' = \Sigma c'$	$100c\ \ /a''$	$C'' = \Sigma C'$	$100C''/c''$
Retained entry major	$d'' = \Sigma d'$	$100d''/a''$	$D'' = \Sigma D'$	$100D''/d''$

Notes:

1. A''/a''--institutional rate of retention to a degree for group and period studied.
2. Other entries in percent graduating column permit comparison of rates for those making changes in major or college with rates for those who do not.
3. The percent entries in this table also provide what might be considered as institutional norms with which comparisons can be made for colleges and departments.

The matrix array of Table 5 can be regarded as an intermediate step in the preparation of such tables (2, 3, and 4) as previously discussed. However, Table 5, in itself, provides a wealth of useful information; not only does it give insights into the flow of students across majors, but it also suggests other ratios that may not be intuitively obvious. The data show graduation after ten semesters for freshmen entering the several colleges of X University. Headings at the top and left indicate the colleges. The cell at the junction of a row and column for the same college indicates the number of entry majors remaining and receiving a degree in that major. Other row entries indicate transfers from the initially chosen to another college. Column entries indicate the number of transfers coming into the specified college from colleges at the left. Row totals at the right (Total Graduates) indicate for each college the number of its original entry majors who eventually graduated from some college. Bottom column totals indicate the number of graduates from each major. A row total divided by the original enrollment (2nd column) and multiplied by 100 gives the degree attainment percentage for original entries to a college regardless of ultimate major.

The underlined diagonal entries divided by the column totals indicate the proportion of graduates in a major that originally entered and remained in it. In this university, 89.6 percent of the graduates of the class of 1974 have remained in their original college. Comparison of corresponding row and college totals indicates gains and losses resulting from the intercollege change process. Similar charts can be made to exhibit changes in majors within and among departments. These charts make it readily possible to observe the nature and amount of the changes.

In the case of X University, as found in Table 5, less than 10 percent (225 ÷ 2729) of the entry students changed colleges and a little over 10 percent

$(\frac{225}{2157} = 10.4)$

/ of the graduates had changed colleges. Obviously this is not an institution in which intercollege changes are extensive. Most of the changes are from career-related programs into the arts and sciences. Data on changes of major within colleges were not available.

Table 5

X University Graduate Rates
for Class of 1974
(Graduation after 10 Semesters)

Original College	Orig. Enroll.	Arch.	Arts & Sci.	Engr.	Hotel	Agr.	Hum. Ec.	I&LR	Total Grads.	% Grad. Entry Enroll.
Architecture	75	49	3						52	69.3
Arts & Science	924	2	698	5	1	10	12	2	730	79.0
Engineering	624	3	83	384	3	23	3	6	505	80.9
Hotel	115		4		81	1	1		87	75.6
Agriculture	647		24	5	3	447	7	2	488	75.4
Human Ecology	217		7			5	167		179	82.4
Ind. & Labor Relations	127		10					106	116	91.3
Totals (Adjusted Enroll.)	2729	54	829	394	88	486	190	116	2157	79.0
Changes into		5	131	10	7	39	23	10	225	
% of retained entry majors in graduates		90.7	84.1	97.4	92.0	91.9	87.8	91.3	89.6	

Details of Analysis

Tables 6 through 11 display the various types and levels of analysis based upon the procedures outlined earlier. The first two tables display the raw data for the College of Social Science in University Y (a Southern land-grant university). Table 6 shows the entry choices of enrollments for freshmen entering fall term 1973 and also the status in majors or programs at time of withdrawal or graduation. Table 7 exhibits the data for graduates in a similar form so that each number appearing in Table 7 can be divided by the corresponding number in Table 6 to obtain the percentage of degree attainment for a particular group. Thus, 197/464 = .386 is the proportion of students entering the College of Social Science who eventually received a degree from some major in that college after four years

In addition to such degree attainment percentages, which contrast data elements from Table 7 with corresponding entries in Table 6, there are other ratios using non-corresponding data that can be used to gain additional insights. For example, 7/32 x 100% = 22% is the percentage of entering history majors who eventually obtain a history degree; this could be formalized by defining yet another index, denoted 100D/a, and called the "index of retention to a degree within the entry major." We resisted doing this for the reason that a proliferation of indices would soon render the tables incomprehensible. Our view was that the retention index 100d/a and the graduation percentage 100D/d, used jointly, would convey the same information as the retention to a degree index, $\frac{100D}{a}$. In fact, this index is simply the product of the two indices we've defined: $\frac{D}{a} = \frac{D}{d} \times \frac{d}{a}$. (In the case of history, we see that .22 = .437 x .50, from Table 8.)

Table 8 arrays the data including the various indices of student retention, attraction, and stability for the departmental majors with a college as a unit. The college retains 52 percent of those selecting it originally. Approximately half (49.9%) of its majors from the group studied changed from other colleges and it gains slightly in enrollment (104.5%) by the change process. About 38 percent of the students originally selecting a major in the College of Social Science received a degree somewhere in the institution. After all major changes were completed, 42.4 percent of those enrolled in that college received degrees from it. Those changing from the college graduated at a lower rate (34.3%) than those remaining in the original major (42.4%), remaining in the college 42.0%), or the revised enrollment 42.5%). However, since these data are limited to a four-year span, persistence to a degree is underestimated, especially by those changing colleges. Such changes often require an additional period of time to complete all requirements.

The major in Sociology retains about half of its originally declared majors and attracts many others so that its final number is nearly double (198.2%) the original enrollment. This major may be very easy, very attractive, or both. The degree attainment rate for sociology majors retaining their entry major (53.1%) is markedly higher than for former sociology students changing to another college (33.3%). In contrast, students changing from History graduate at a higher rate (54.5%) than original History majors (43.7%). Again, extension beyond a four-year span might change the picture.

Table 6

University Y

Social Science - Entry

Major	a Entry Enrollment	b Changes to Other Colleges	c Changes to Other Majors Within College	d Same Major	e Changes From Other Majors Same College	f Changes From Other Colleges	g Revised Enrollment
ECON	5	2	1	2	8	22	32
GEOG	0	0	0	0	3	9	12
HIST	32	11	5	16	6	19	41
INT. STUD.	6	3	2	1	0	7	8
LA & SC	132	91	26	15	5	15	35
PSCI	127	46	24	57	5	31	93
PSYCH	97	40	9	48	9	44	101
SOC	56	24	3	29	24	58	111
URB. AFF.	9	4	1	4	11	37	52
College	a′ 464	b′ 221	71	d′ 172	e′ 71	f′ 242	g′ 485
				c′			

Table 7

University Y

Graduates

	A	B	C	D	E	F	G
ECON	2	2	0	0	5	12	17
GEOG	0	0	0	0	2	5	7
HIST	15	6	2	7	3	9	19
INT. STUD.	3	2	1	0	0	2	2
LA & SC	42	26	13	3	1	7	11
PSCI	51	17	9	25	2	11	38
PSYCH	39	14	4	21	4	18	43
SOC	25	8	2	15	12	32	59
URB. AFF.	2	1	0	1	2	7	10
College	A′ 179	B′ 76	31	D′ 72	E′ 31	F′ 103	G′ 206
				C′			

Table 8

University Y

College of Social Science

Major	100 d/a Index of Major Retention	100(e+F)/g Index of Change Importance	100 g/a Index of Stability	% Graduated 100 D/d Original Major	 100(c+d)/(C+D) Original College	 100 B/b to Other Colleges	 100A/a of Entry Enroll.	 100G/g of Adj. Enroll.
ECON	40.0%	93.8%	640.0%	--	--	100.0	40.0	53.1
HIST	50.0	61.0	128.1	43.7	42.8	54.5	46.8	46.3
LA & SC	11.4	57.1	26.5	20.0	36.5	28.5	31.8	31.4
PSCI	44.9	38.7	73.2	43.8	41.9	36.9	40.1	40.8
PSYCH	49.5	52.5	104.1	43.7	43.8	35.0	40.2	42.5
SOC	51.8	73.9	198.2	51.7	53.1	33.3	44.6	53.1
URB. AFF.	44.4	92.3	57.8	25.0	20.0	25.0	22.2	19.2
	100 c′/a′ College Retention	f′/g′	g′/a′	100 D′/d′	100 C′/c′	100 B′/b′	100 A′/a′	100 G′/g′
College	52.4%	49.9%	104.5%	41.9	42.4	34.3	38.6	42.5

Majors with enrollments less than 30 (entry or revised) are not shown but are included in college summary.

Tables 9, 10, 11 exhibit for the colleges and for the university as a whole, data similar to that in Tables 6, 7, and 8 for the majors and colleges. Table 11 facilitates comparisons among the colleges. The column, "Original Enrollment Percent Graduates," shows the percent of students entering a college that graduate from it whether in the same or different major. The percent for the Architecture program is low because this is a five-year program, and the data cover only four years from entry. From Table 9, we see that, for the university as a whole, 65 percent of the students remain in the college of entry, 38 percent with the same major. The graduation rate for students persisting in the college of entry (40%) is almost the same as for those changing from one college to another (37.5%), but, as noted above, the latter is understated. It is worthy of note that intercollege changes appear to raise the graduation rate in Home Economics, Engineering, and Social Science whereas most rates decrease slightly.

Also from Table 9 we see that at University Y the composite of changes to other colleges (1336) and changes within colleges (1029) is 2365, indicating that nearly 62 percent of the entering students changed major or college. Whereas 51 (.51 = 519/1029) percent of those who changed majors within a college received a degree, only 32 (.32 = 476/1455) percent of those retaining the same major did so. The graduation percentage for changers to other colleges was 37.5 (.375 = 501/1336) percent.

Table 9

University Y
Four-Year Graduation Analysis

College	a′ Entry Enrollment	b′ Changes to Other Colleges	c′ e′ Changes Within College	 d′ Same Major & College	f′ Changes From Other Colleges	g′ Revised Enrollment
Agriculture	481	153	46	282	110	438
Arch. (5-yr. degree)	250	70	10	170	41	221
Business	463	99	237	127	309	673
Education	324	94	26	204	153	383
Engineering	643	190	408	45	59	512
Home Economics	210	53	139	18	87	244
Humanities	329	195	33	101	210	344
Natural Science	656	261	59	336	125	520
Social Science	464	221	71	172	242	485
	a′′ 3820	b′′ 1336	1029	d′′ 1455	b′′ 1336	a′′ 3820
Ratio $\frac{N}{3820}$		.3497	.2693	.3810	.3497	
			c′′ 2484* .6503			

Table 10

	A′	Graduates B′	C′ E′	 D′	F′	G′
Agriculture	187	63	23	101	32	156
Architecture	33	19	1	13	4	18
Business	188	32	145	11	111	267
Education	161	44	15	102	66	183
Engineering	209	35	169	5	15	189
Home Economics	116	27	88	1	55	144
Humanities	128	86	14	28	64	106
Natural Science	295	119	34	142	51	227
Social Science	179	76	30	73	103	206
Ratio of G total to total directly above	A′′ 1496	B′′ 501	519	D′′ 476	B′′ 501	A′′ 1496
	.3916	.3750	.5103	.3245	.3750	.3916
			C′′ $\frac{995}{2484}$ = .4006*			

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*Pertain to all students remaining in college chosen at entry.

Table 11

University Y
Intercollege Comparisons
(Four Years)

				% Graduated		
College	100c′/a′ Index of College Retention	100f′/g′ Index of Change Significance	100g′/a′ Index of Stability	100A′/a′ Original Enrollment Percent Graduates	100B′/b′ Changes to Other Colleges	100G/g′ Revised Enrollment Percent Graduates
Agriculture	68%	25.1%	91.1%	38.8	41.1	35.6
Architecture (5-yr. degree)	72	18.6	88.4	13.2	27.1	8.1
Business	78	45.9	145.4	40.6	32.3	39.6
Education	71	40.0	118.2	49.7	46.8	47.7
Engineering	71	11.5	79.6	32.5	18.4	36.9
Home Economics	75	35.7	116.2	55.2	50.9	59.0
Humanities	41	61.1	104.5	38.9	44.1	30.8
Natural Science	60	24.0	79.3	45.0	45.5	43.6
Social Science	52	49.9	104.5	38.6	34.3	42.4
	100c″/a″					
University	65	--	--	40.0	37.5	39.1

Table 12 shows the persistence to a degree of new freshmen entering a Western state university in 1973. The first data column exhibits the original entry numbers in each of the colleges. The second column indicates the number of students who are still enrolled or have received a degree after six years (1979). The composite percentage of degree recipients is 40, with variations from 35 in Business to 48 in Engineering. The percentages in Column 3 include all graduates and continuing students, whether in the entry major and college, alternate major in the same college, or in another college. The last two columns show the percentage of degree recipients persisting in the original major and original college. Subtraction of the Original College percentage from 100 yields the percentage of original entries into a college receiving a degree from another college in the university. The differences between the last two columns indicate the extent of changes in major within colleges. Changes in major, while remaining in the Arts College (28%), are more common than for any other college. Changing of majors in the Science College is a rare phenomenon.

Agriculture, Science, and Business show extensive shifts to other colleges while less than one fifth of the entries into the other three colleges transfer to another college to complete degree requirements. The data available from this institution did not permit relating the persistence rates to a degree for intercollege major changes to the actual number of individuals making changes. Hence it was not possible to compare degree-acquiring rates of students making changes in major or college to those remaining in the original choice.

Table 13 exhibits for transfer students entering in 1973 the same information as the preceding one does for first-time freshmen. The data indicate that transfers received degrees in their original majors or original colleges to a considerably greater extent than did the native students. Essentially 90 percent of the transfers received degrees from the college of original entry. Moreover,

Table 12

Retention by Original Major and College at a Western State University 1973-1979 First-Time Freshmen

	1973	1979		% of Grads. & Cont. Students in	
College	a' Freshmen	A' Grads. & Cont. Students	$100A'/a'$ Percent	$100D'/A'$ Original Major	$100C'/A'$ Original College
Agriculture	266	103	39	49	56
Arts	321	119	37	55	83
Business	183	64	35	39	61
Engineering	196	95	48	73	82
Env. Studies	35	16	44	75	88
Science	197	88	45	44	45
All	1199	485	40	54	70

Table 13

Retention by Original Major and College at a Western State University (1973 Transfers from Other Institutions)

				% of Grads. & Cont. Students in	
College	a' 1973 Entry	A' 1979 Grads. & Cont. Students	$100A'/a'$ Percent	$100D'/A'$ Original Major	$100C'/A'$ Original College
Agriculture	416	211	51	79	87
Arts	595	264	44	76	97
Business	514	262	51	71	81
Engineering	485	271	56	82	93
Env. Studies	132	89	67	74	93
Science	209	100	48	57	83
All	2351	1197	51	75	90

the 51 percent persistence for transfers was markedly greater than the 40 percent for freshmen. The university is in a state noted for its community colleges and therefore is heavily dependent upon transfer students (2351 against 1199 freshmen). Clearly, the retention rate for first-time freshmen would not adequately depict the persistence of students on such a campus.

A comparison of these two tables (12 and 13) demonstrates why it is important to separate the native students (entering as first-time freshmen) from transfer students and perform two analyses. A mixing of these two groups of very different students would result in ratios and percentages reflecting the characteristics of neither.

Other information suggests that the persistence rates of this university are much like those of similar institutions in the area.

Summary

There are many possible factors involved in interpreting the data and indices exhibited in the previous pages. Some of these are likely to be general and apply across institutions. Other factors may be idiosyncratic to the institution, to units in it, or to the type of students attracted. In the present era, numerous institutions have found that the career orientation of students is reflected by students changing to vocationally-oriented programs and by a higher retention and graduate rate in these vocationally-oriented programs than in the arts and science majors.

What are the prospects of markedly improving persistence to a degree by making the type of analysis indicated here and by following through on the implications? With the limited amount of data that have been examined thus far, it would be premature to promise a great deal. This sort of analysis should focus institutional attention on the fact that, in most colleges, the four-year campus residency with a degree completed at that time is no longer a standard pattern even for those who persist to the degree. As more adults, part-time students, and recurrent rather than continuous enrollments are a regular part of the pattern of college attendance, studies of degree accomplishments need to be on a longer period of time than the usual four or five years. This pattern of analysis would tend to focus concerns with regard to persistence on the policies, rules, and advising and counseling provided by the institution. The various units and programs offering degrees would come under scrutiny to determine unit persistence rates, transfer, program change, and dropout patterns. Further attention to the variations found and the consideration of these variations in the light of the many possibilities have been noted in the immediately preceding part of this commentary could direct attention to policies, personnel considerations, and the operations of departments and professors which are neither prejudicial to nor supportive of continuance in college.

In some cases, it seems quite possible that the findings would be such as to raise questions about the quality or the relevance of particular programs. A unit attracting large numbers of students and graduating an unusually high percent could be doing either a very good or a very poor job. The data raise a question but do not determine the answer. On the other hand, a unit which fails to attract students or is unable to hold those that are attracted may need to undergo major changes in its program or in its educational philosophy. In extreme cases it might even be necessary to replace the existing instructional staff or part of it. The major implication of this approach to analysis of retention and degree persistence is that it concentrates attention on the academic programs of the institution and offers the possibility of identifying some sound educational reasons for changing that program and the personnel offering it rather than focusing attention on peripheral matters that only become relevant to persistence once the academic programs themselves are not seen as demanding and relevant by the students.

In the following chapter, we shall consider in considerable detail the persistence data on two state universities over a span of years. This will provide further insights into the potentials of this approach.

Chapter Four

Student Persistence in Two Universities

This chapter reports the experiences and findings in a study of degree persistence at Michigan State University and a second university. The more detailed MSU study covers a span of ten years. The interval of ten years was selected simply because earlier studies of dropouts and returns had indicated a significant number of persons completing degree requirements after a time lapse of five, six, or seven years. Part-time degree candidates have also become more common and, for these, an interval of seven to ten years is not uncommon. The data for the second university, covering a five-year interval, are much less detailed and include only first-time freshmen.

We found that the attempt to carry out this study was complicated by numerous factors worthy of note since others who follow in our footsteps should anticipate similar problems. First of all, some of the tape records of the early part of the period had deteriorated to the point where accuracy was impaired. This difficulty was overcome, but only at considerable effort. Second, changes in the nature and coding of programs, including program revisions, deletions, and additions, caused difficulties in tabulating and interpreting data. Third, students are not recorded as having acquired a degree until after they have filed a formal request. This request initiates a careful check of records and, if all requirements are met, a certification to the effect that the degree is awarded. A surprising number of students apparently neglected to do so on schedule, and a few had never done so; the latter were not recorded as graduates. Further, once a student filed a delayed application for a degree, the date recorded for the award was the application date and not the actual graduation date. Another difficulty was found in the sheer number of programs and majors, many of which varied only slightly from each other and some of which had had only a few students enrolled and no graduates. Joint majors and essentially identical majors offered in different colleges caused minor difficulties. For some students, the initial choice of program was not available, and a few individuals were accorded special status and granted degrees with uncertain or indeterminate majors--perhaps uniquely individualized. Multiple changes of major or program, usually within but occasionally across colleges, were found but ignored. A few individuals acquired two baccalaureate degrees, and a number received both a master's and a baccalaureate degree within a normal span of time for the baccalaureate. In the second institution, the procedures used and hence the records did not permit tracing of all of the major changes in the arts and sciences area.

Persistence at Michigan State University

Prior studies of persistence at this university had been based on new freshmen with occasional assays of the persistence of junior college transfers. New students, freshman and transfer, accounted for 35 percent of the Fall 1969 enrollment and 38 percent of these new students were transfers. Since transfer status depends on evaluation of credits which depends, in turn, on the program selected, transfer class designation, required degree credits and time are uncertain, often delayed, and sometimes changed. These conditions make it very difficult to accurately associate a transfer student with a particular graduation class--an association that must be made if a researcher wishes to use the customary "entering freshman class" cohort and incorporate transfers by merging them with the appropriate graduation class. We evaded this difficulty by selecting as our question for investigation: What percent of the students enrolled in Fall 1969 were graduated by Summer 1979? This is equivalent to tracking a cohort consisting of all students enrolled as of Fall 1969. The data indicated that the degree attainment rate was 56 percent for both new freshmen and new transfer students. This lack of difference at the gross level reinforced our decision to study the question as phrased above and combine native and transfer students. However there are advantages to studying first-time new freshmen separately from transfer students. We shall return to comment upon this point later.

Table 14 shows the college and university summary data of the percentages of students enrolled in Fall 1969 attaining a degree within ten years. The table uses the notation developed in Chapter Three (Table 3) and is to be read as follows, using the College of Agriculture as an example:

> Column I shows that 71 percent of the students originally entering a major or program in Agriculture received a degree from the university in some major and college within ten years.
>
> Column II shows that 80 percent of the students who entered the College of Agriculture and subsequently changed to another college of the university received a degree within ten years.
>
> Column III shows that 76 percent of the students who entered the College of Agriculture and changed major or program within the college received a degree
>
> Column IV shows that 49 percent of the students remaining in their original program or major received a degree.
>
> Column V is for a college a duplicate of Column III (total number changing from majors to other majors must equal total number changing to majors from other majors).
>
> Column VI shows that 76 percent of the students transferring into the college of Agriculture from another college in the university received a degree in agriculture.
>
> Column VII shows that, for Agriculture, 71 percent of the revised college enrollment (after changes in programs and majors) received a degree in the college. The fact that this is equal to I is fortuitous. I and VII for the university must be identical.
>
> Column R indicates that 65 percent of the students entering the College of Agriculture remained in that college (same or different major).
>
> Column T shows that 34 percent of the revised enrollment of the college were students not originally enrolled in it.

Column S indicates that the college enrollment increased to 123 percent of the entry enrollment as a result of students changing from other colleges to the College of Agriculture.

Table 15 exhibits, for the entire university, the type of data from which the preceding table was derived. Note that the last column of this table corresponds to the first six entries in the last row of the preceding table. The first row shows the total number of students enrolled at the beginning of the fall quarter. Of the 32,086, 23,266 (73%) attained a baccalaureate degree in the succeeding ten-year interval. (It should be noted that this high percentage reflects the fact that the cohort studied was composed of all students enrolled as of Fall 1969 and not the more customary entering freshmen cohort.) The entry college and program or majors of each of the 32,086 students was ascertained as well as the college and program major on record at graduation or in the last quarter of attendance. Using these data, it is thus possible to fill in all of the cells of the table. Of the original 32,086, 16,330 remained in the originally selected program, 10,047 transferred to another college within the university, and 5,349 changed to another major or program within the same college.

A number of interesting statements emerge from the observation of Columns 1 and 2. Of the initial group, 51 percent retained their entry major and 17 percent changed majors but remained within colleges. Thus about two thirds of the students remain in the college originally chosen. The number of graduates in each category is exhibited in Column 3 and the percent graduated in Column 4. The percent of the students enrolled in Fall 1969 receiving degrees sometime witnin the next decade is 73, but the more significant point is that the percent differs markedly for those remaining in their original major and those changing major or transferring from one college to another.

Table 14

Michigan State University

	Graduation Percentages							Indices		
College	I	II	III	IV	V	VI	VII	R	T	S
Agriculture	71	80	76	49	76	76	71	65	34	123
Arts and Letters	69	76	80	62	80	68	66	69	25	92
Business	80	74	84	80	84	82	82	81	33	120
Communication Arts	76	74	72	78	72	76	77	75	30	106
Education	77	76	88	71	88	83	80	82	39	134
Engineering	79	77	75	82	75	82	81	67	19	83
Human Ecology	80	79	82	79	82	75	78	81	31	117
Medical Technology	78	98	85	72	--	80	75	79	43	128
Natural Science	73	77	73	69	73	71	70	62	19	76
Social Science	76	81	81	72	81	71	73	76	36	119
Veterinary Medicine	65	64	95	0	95	87	74	41	38	79
Total University	73	76	81	68	81	76	73	67.6		

I - Entry (100A´/a´).
II - Changed to other colleges in institution (100B´/b´).
III - Changed to other majors, same college (100E´/e´).
IV - Retained original major and college (100D´/d´).
V - Changed into a major from another major within college (100E´/e´).
VI - Changed into a major from another college (100F´/f´).
VII - Adjusted enrollment (100G´/g´).
R - Retention rate of college (number remaining in college/number entering college (100c´/a´).
T - Percent of in-changers from other colleges (100f´/g´).
S - Adjusted enrollment as percent of entry enrollment (100g´/a´).

Table 15

Michigan State University

Composite of all Colleges and Programs

	Number	Percent	Number Graduated	Percent Graduated
Initial Enrollment	32,086	100	23,266	73
Changed College	10,407	32	7,887	76
Retained Entry College	21,679	68	15,379	71
Retained Entry Major	16,330	51	11,055	68
Changed Entry Major	5,349	17	4,324	81
Changed College or Major	15,756	49	12,211	78

Whereas 81 percent of those changing major within the same college were graduated and 76 percent of those changing from one college to another received a degree, of those remaining in the original major, only 68 percent were graduates. This initially rather surprising fact is a result of several conditions relating to program change. First, early dropouts or dismissals will not have had time to consider and make a change. Secondly, enrollment restrictions or quotas on a major may result in imposition of scholarship standards that bar all but superior students. As a result, changes of major or college may not be possible for students with marginal or unsatisfactory grades in the initial major. Also, some possible changes become unattractive because students who would change to them would have to make up requirements and hence extend their stay in college. In some cases it may be simpler for a student to transfer to another institution than to change major or program within the original institution. When all of these factors are considered, it is not surprising that changes in program are associated with increased persistence and hence generally yield higher retention rates. However as

Table 21, College of Engineering, shows, this is not universal. Students remaining with their original major in the College of Engineering show a degree attainment rate of 82 percent, whereas those changing to other colleges have a rate of 77 percent degree retention. A similar pattern will be found in University Two.

Tables 16 through 24 exhibit for colleges the data on majors and programs corresponding to that exhibited for the university. Certain colleges and programs have been excluded because of unique problems or small numbers. Programs or majors enrolling fewer than 50 students (entry or adjusted enrollments) have been excluded. Students in so-called residential colleges who were planning to attend professional or graduate schools tended to change ultimately to a traditional major and college in order to obtain a degree specifying a recognized field of study. This resulted in low graduation rates for these colleges.

Degree persistence rates within entry major (Column IV) of 85 percent or over were found for the majors in Dairy Science, Packaging, and Resource Development of the College of Agriculture (Table 16); in Economics, Financial Administration, Personnel Administration, and Transportation and Distribution of the College of Business (Table 18); in Civil Engineering, Electrical Engineering, Mechanical Engineering, and Systems Science of the College of Engineering (Table 21); in Dietetics and Foods for the College of Human Ecology (Table 22); in Entomology and Physiology of the College of Natural Science (Table 23); and in Geography and Social Science Teaching for the College of Social Science (Table 24). The majority of these high degree persistence majors have apparent career implications. The exceptions are worthy of comment. The Economics Department is in the College of Business and its major degree persistence rate undoubtedly reflects that association. In contrast, the degree persistence rates for social science majors in Psychology (72%), Political Science (73%), and Sociology (63%) offered in the College of Social Science are distinctly low. In the College of Natural Science, the degree persistence rates for majors in Entomology (93%) and Physiology (100%), although above 85 percent, were not markedly higher than those of Botany (80%), Microbiology (84%), and Zoology (78%). Generally, the biological sciences achieved considerably higher persistence rates for original majors than did the physical sciences. In contrast to the preceding, relatively low rates of persistence were recorded for Studio Art, English, Foreign Languages, Sociology, Anthropology, Mathematics, Physics, and the preprofessional programs for dentistry, medicine, and law. The colleges with the highest retention rates (78% or above) were Agriculture, Business Education, and Human Ecology. Again, the career implications are evident.

Table 19 exhibits the information for the College of Communication Arts and Sciences. Those students remaining in their Advertising major show a higher degree achievement rate (84%) than do students transferring to other majors (Column III) or colleges (Column II). This was not the only major and college in which this occurred, but no ready explanation of this departure from expectation emerged.

It is tempting to employ such data as that just exhibited conjoined with various other items of knowlede and experience to hypothesize reasons for the variations in degree persistence rates and in change to or from various majors. This tendency must be represeed, for the results would be little more than mere speculation. In the data presented, we suspect there are some programs in which faculty rapport with students is a significant factor in degree persistence. In other cases, uniqueness or quality is probably a consideration. In still others, program ease or difficulty, aided perhaps by tough or relaxed grading standards, may be a factor.

Ideally, these data, with some university and college summaries, should be sent to and reviewed with each program. Interviews with current and past majors and with persons in units to or from which the program sends or receives students could be productive. However, in a venture covering as long a period as this one, a typical faculty reaction that the evidence is irrelevant to the present scene can be initially expected. Only as the data are used to explore some of the factors suggested is it likely that program and departmental personnel will become convinced that some alterations in personnel and program may be desirable to attract and retain majors.

Table 16

Michigan State University

College of Agriculture and Natural Resources

Major or Department	Graduation Percentages							Indices		
	I	II	III	IV	V	VI	VII	R	T	S
Animal Husbandry	74	73	86	68	33	57	60	58	42	99
Building Construction	69	67	75	69	60	68	68	90	52	185
Crop Sciences	75	57	100	79	67	71	76	78	32	114
Dairy Science	79	50	57	85	67	57	78	81	29	114
Fisheries & Wildlife	72	84	75	67	100	66	67	56	27	76
Food Science	68	86	83	53	100	100	73	54	42	93
Forestry	80	88	68	79	100	62	77	65	23	85
Packagine	88	92	90	87	67	80	85	73	34	110
Park & R.R.	81	87	73	81	64	75	76	62	54	135
Resource Development	84	86	80	85	69	74	75	52	81	288
College	71	80	76	49	76	76	71	65	34	123

I - Entry (100A/a).
II - Changed to other colleges in institution (100B/b).
III - Changed to other majors, same college (100C/c).
IV - Retained original major (100D/d).
V - Changed into a major from another major within college (100E/e).
VI - Changed into a major from another college (100F/f).
VII - Revised enrollment (100G/g).
R - Retention rate of major (number remaining in major/ number entering major) (100d/a).
T - Percent of in-changers from other majors and colleges (100(e+f)/g).

Table 17

Michigan State University

College of Arts and Letters

Major or Department	Graduation Percentages I	II	III	IV	V	VI	VII	Indices R	T	S
Art, History	74	67	75	76	82	63	72	62	68	191
Art, Studio	65	76	84	51	84	54	59	77	36	45
English	69	76	87	64	67	65	64	61	31	88
French	74	84	74	67	100	78	72	52	33	77
German	65	67	57	66	75	83	72	59	41	100
History	73	78	71	68	75	74	71	55	37	88
Humanities	76	76	91	71	70	72	71	58	49	113
Hum. Pre-Law	75	88	55	68	100	75	73	38	36	60
Applied Music	68	81	79	58	65	38	58	55	42	95
Music, Sch. Choral	73	78	88	67	83	50	72	37	40	62
Music, Sch. Instr.	76	82	79	72	71	50	71	47	23	61
Philosophy	57	75	63	51	50	71	62	67	54	159
Russian	77	100	100	62	100	88	73	59	41	100
Spanish	74	75	80	72	67	75	72	59	36	91
College	69	76	80	62	80	68	66	69	25	92

Table 18

Michigan State University

College of Business

Major or Department	Graduation Percentages							Indices		
	I	II	III	IV	V	VI	VII	R	T	S
Accounting	81	70	88	80	83	84	82	60	49	117
Business Law & Office Admin.	76	82	74	63	--	--	63	23	--	23
Economics	91	93	93	91	87	79	86	74	47	139
Financial Administration	84	64	85	86	88	84	86	68	72	240
General Business Administration	76	70	85	76	78	74	76	55	30	78
Hotel & Restaurant Management	79	68	80	81	78	75	79	78	34	85
Marketing	82	90	68	82	88	92	87	78	38	192
Mat. and Oper. Management	83	76	80	84	92	74	83	67	27	91
Office Admin.	63	60	70	62	--	54	60	63	28	87
Personnel Admin.	84	67	92	89	88	85	87	64	66	190
Trans. & Distr.	84	80	71	92	69	82	81	52	65	148
College	80	74	84	80	84	82	82	81	33	120

Table 19

Michigan State University

College of Communication Arts and Sciences

Major or Department	Graduation Percentages							Indices		
	I	II	III	IV	V	VI	VII	R	T	S
Advertising	81	72	72	84	80	80	83	75	31	110
Audiology	76	82	100	75	80	78	76	83	42	145
Communication	81	89	81	78	57	73	75	71	43	124
Journalism	72	69	57	74	83	79	76	68	30	98
Telecommunication	80	80	81	81	72	74	78	79	35	119
College	76	74	72	78	72	76	77	75	30	106

Table 20

Michigan State University

College of Education

Major or Department	Graduation Percentages							Indices		
	I	II	III	IV	V	VI	VII	R	T	S
Elementary Educ.	78	79	89	72	82	73	73	57	29	80
Elementary Educ. Int. P.	75	73	81	69	89	83	75	37	32	54
Industrial Arts	81	54	97	68	89	65	70	27	65	77
Physical Educ.	71	69	86	58	85	60	59	46	22	59
College	77	76	88	71	88	83	80	82	39	134

Table 21

Michigan State University

College of Engineering

Major or Department	Graduation Percentages							Indices		
	I	II	III	IV	V	VI	VII	R	T	S
Chemical Engr.	82	80	90	81	100	65	80	55	19	67
Civil Engr.	86	68	100	89	76	73	84	73	40	121
Electrical Engr.	82	83	73	84	70	88	81	57	42	97
Mechanical Engr.	88	86	65	91	71	89	88	72	27	100
Computer Science	80	73	91	82	67	84	80	56	60	139
Systems Science	81	70	86	85	85	100	88	54	66	157
College	79	77	75	82	75	82	81	67	19	83

Table 22

Michigan State University

College of Human Ecology

Major or Department	Graduation Percentages							Indices		
	I	II	III	IV	V	VI	VII	R	T	S
Child Development	80	90	75	75	85	61	70	56	52	116
Dietetics	92	100	100	88	100	86	89	72	42	123
Family Ecology	77	71	88	69	58	69	66	45	47	85
Foods	90	100	83	88	100	75	85	59	48	114
Home Ec. Educ.	83	82	82	84	80	53	79	59	26	79
Interior Design	74	65	80	74	63	84	76	68	68	93
College	80	79	82	79	82	75	78	81	31	117

Table 23

Michigan State University

College of Natural Science

Major or Department	Graduation Percentages							Indices		
	I	II	III	IV	V	VI	VII	R	T	S
Biological Science:										
Biochemistry	79	80	84	78	65	62	74	72	26	84
Bio. Sci.	73	78	77	67	68	61	65	42	43	74
Botany	87	100	0	80	67	93	81	67	73	247
Entomology	88	50	0	93	88	82	88	88	56	200
Microbiology	83	87	67	84	77	65	76	60	64	163
Physiology	92	92	50	100	87	72	84	42	77	179
Zoology	81	86	87	78	75	74	76	59	54	127
Physical Science:										
Physical Science	71	87	70	58	67	67	62	44	51	90
Chemistry	74	77	66	75	77	59	73	50	29	71
Chem. Teaching	78	84	71	77	92	100	85	27	52	55
Geology	69	62	71	71	88	74	76	69	57	160
Mathematics	76	78	81	75	65	71	73	51	23	65
Nursing	66	61	58	69	58	77	69	70	12	80
Physics	70	79	64	66	77	93	70	47	22	60
Predental	59	73	70	4	0	57	16	20	21	26
Pre-Med.	64	77	76	3	50	67	20	17	28	24
College	73	77	73	67	73	71	70	62	19	76

Table 24

Michigan State University

College of Social Science

Major or Department	Graduation Percentages							Indices		
	I	II	III	IV	V	VI	VII	R	T	S
Anthropology	64	71	75	60	63	64	62	70	59	170
Criminal Justice	81	82	75	82	71	73	78	84	44	150
Geography	84	83	33	86	71	54	74	76	45	138
Labor & Industrial Relations	--	--	--	--	88	91	90	--	100	90
Landscape Arch.	73	66	43	76	100	71	76	79	26	106
Political Science	74	80	72	73	89	77	75	65	37	102
Psychology	75	78	81	72	71	77	74	62	44	110
Social Science	71	87	83	64	84	70	70	66	52	73
Soc. Sci. Pre-Law	76	78	88	46	67	62	50	23	22	29
Soc. Sci. Teaching	86	86	84	87	76	39	75	40	36	62
Sociology	72	81	89	63	63	63	63	58	47	110
Social Work	71	75	72	69	100	100	69	43	1	43
Urban Planning	70	63	70	73	100	76	78	63	51	79
College	76	81	81	72	81	71	73	76	36	119

Persistence at University Two

Tables 25 and 26 reflect the overall data of University Two on major college changes, and degree acquisition during the subsequent five years for first-time freshmen entering in Fall 1975. Of the entry group, 62.4 percent acquired a degree somewhere in the university. This figure is low because of numerous small groups in the health sciences that must transfer to the College of Medicine to acquire a degree. The percentage would also increase somewhat as additional individuals completed degrees in subsequent years.

In Table 25, the second line shows that those students who changed colleges (within the university) amounted to about 23 percent of the entry group and that over 71 percent of the intercollege changers acquired a degree. Those students remaining in the college of original choice (76.5%) could retain their original major or change it to another offered in the same college. About 60 percent of those remaining in the entry college received a degree, with the graduation percentage of those retaining the original major dropping to 54 percent. Of those students changing majors within the entry college, slightly over 71 percent were graduated. In the composite group of major or college changes, 71 percent received degrees. Many changes within the Arts and Science college could not be traced.

It should be noted that, once again, for the group changing colleges or majors (49.7%) the degree completion rate of 71 percent was markedly above the rate of 53.6 percent found for those retaining their original major and college. The only exception to this pattern occurs in the College of Engineering where only 53 percent of those changing to another college (Table 27, Column II) graduate as compared to the 58 percent (Column IV) who remain with their entry major in the college. Extension of the data over a further period of years would tend to increase this difference since the group made up of those retaining

Table 25

University Two

Composite of All Colleges and Programs

	Number	Percent	Number Graduated	Percent Graduated
Initial Enrollment	5397	100	3369	62.4
Changed College	1268	23.5	907	71.5
Retained Entry College	4129	76.5	2462	59.6
Retained Entry Major	2713	50.3	1453	53.6
Changed Entry Major	1416	27.2	1009	71.3
Changed College or Major	2684	49.7	907	71.0

Table 26

University Two

College	Entry	Transferred to Other Colleges	Changed Major Within College	Same Major	From Other Colleges
Agriculture	498	116	162	220	213
Commerce & Business	605	53	235	317	311
Education	177	64	15	98	63
Engineering	1026	164	246	616	121
Fine & Applied Arts	432	110	71	251	57
Liberal Arts & Science	2465	698	677	1090	266
Applied Life Studies	152	44	9	99	77
Other	42	19	1	22	160
Total	5397	1268	1416	2713	1268

the original major includes most of the marginal or unsatisfactorily performing students who either did not stay around long enough to change major or college or whose records were unacceptable for such change. The same factors just noted indicate that, although some increase in degree persistence rate might result from encouraging major and college change, it is by no means obvious that this would happen. There are many factors involved, including especially the quality of advising and the conditions specified for or delimiting such change.

Degree attainment rates increase with progress toward a degree so that programs or majors that delay admission to the junior year inevitably have higher persistence rates than those programs admitting students as freshmen or sophomores. Even if by delaying acceptance into a major the 53.6 percent for retained entry major could be increased to 71 percent, the possible additional number of graduates would be only about 470. This change would raise the overall persistence to a degree rate to 71 percent, but this is unrealistic. Moreover, it would require intervention into the handling of majors and program matters (including student evaluation) in each program unit. This suggests that each college and program should be contacted to discern whether there are sufficient differences to suggest specific points of intervention in regard to majors and policies controlling them.

Turning to Table 27, we see from Column VII that, at the college level, the colleges of Agriculture (64%), Commerce and Business (75%), Education (74%), and Engineering (64%) have higher degree completion rates than Fine and Applied Arts (60%), Liberal Arts and Sciences (55%), and Applied Life Studies (50%). Column R shows that Commerce and Business (91%) and Engineering (84%) tend to hold entry choices more than other colleges. Transfers into the colleges (Column T) form a relatively high percentage of adjusted enrollments for Agriculture (36%), Commerce and Business (36%), Education (36%), and Applied Life

Table 27

University Two

Major or Department	Graduation Percentages							Indices		
	I	II	III	IV	V	VI	VII	R	T	S
Agriculture	60	63	60	49	75	71	64	77	36	120
Commerce & Business	70	70	70	60	83	85	75	91	36	143
Education	70	70	70	65	100	83	74	64	36	99
Engineering	61	53	63	58	74	73	64	84	12	96
Fine & Applied Arts	61	62	61	59	69	56	60	75	15	88
Liberal Arts & Sci.	62	79	55	49	65	53	55	72	13	84
Applied Life Studies	59	75	52	49	78	48	50	71	42	122
Total University	62	72	60	54	71	72	62	77	71	100

I - Entry (100A′/a′).
II - Changed to other colleges in institution (100B′/b′).
III - Retained original college (100C′/c′).
IV - Retained original major and college (100D′/d′).
V - Changed into a major from another major within college (100E′/e′).
VI - Changed into a major from another college (100F′/f′).
VII - Revised enrollment (100G′/g′).
R - Retention rate of college (number remaining in college/ number entering college))100c′/a′).
T - Percent of in-changers from other colleges (100f′/g′).
S - Adjusted enrollment as percent of entry enrollment (100g′/a′).

Studies (42%) gain in enrollment as a result of intercollege changes. The attractiveness of career-related programs is clearly evident in these shifts.

In addition, Table 27 shows the percent of various groups of students receiving degrees. The groups, as defined below the table, account for changes in majors and programs made by students between time of entry and meeting of degree requirements. Note that Column III is defined differently than it was in the corresponding table for Michigan State University (Table 14). The indices R. T, and S reflect differences in the colleges in retaining and attracting students and in enrollment changes from entry to adjusted enrollments. The table yields the following statements:

Column I.	Sixty percent of the students originally entered in Agriculture received degrees somewhere in the university.
Column II.	Sixty-three percent of the students who changed from Agriculture to other colleges in the university received degrees in these colleges.
Column III.	Sixty percent of the students who remained (same or different major) in Agriculture received degrees.
Column IV.	Only forty-nine percent of those students who retained the original major received degrees.
Column V.	Seventy-five percent of those students who changed major within their entry college received degrees.
Column VI.	Seventy-one percent of the students changing to Agriculture from another college received degrees.
Column VII.	Sixty-four percent of the adjusted enrollment (entry less changes of plus changes into Agriculture) received degrees in Agriculture.
R	The College of Agriculture retained 77 percent of its entry enrollment.
T	Thirty-six percent of the adjusted enrollment is made up of students changing into the college
S	As a result of a relatively high college retention rate (77%) and numerous transfers into the college, the adjusted enrollment increased by 20 percent over the entry enrollment.

The College of Commerce and Businesshas the highest rate of retention (Column R) of entry enrollment. Over 90 percent of the entry group remains in the college. For Engineering, 84 percent of the entry group remains in the college.

Within the colleges there are programs or departmental majors in which the data depart markedly from the total college situation. However, in many of these cases, the numbers are relatively small and hence the interpretation is dubious. If a department retains and graduates all of its entry group of 15 students, should this be attributed to chance variations, to student selection and rapport, or to low standards that permit everyone to proceed without difficulty? Only as major or program patterns are studied over time is it possible to provide explanations that may lead to increased persistence. Several cases were found in which the graduation rate for those retaining major and college was greater for those changing out of or into the major. In Forest Science in Agriculture, only 38 percent of those remaining in the major received a degree and (from data not here reported) only 44 percent of those transferring into the major from other colleges were graduated. In contrast, 83 percent of those students changing to another major in the college were graduated. In addition, the number of students in the major reflects its career implications. The evidence at least justifies some investigation to determine the factors involved.

Tables 28 to 30 exhibit for each college the indices and the percent of graduates for those majors with 25 or more students involved. The variations in the indices and percentages suggest that numerous questions can be raised and pursued in an attempt to provide explanations for the variations. These variations may be thoroughly justified, but they may also suggest modifications in practices and standards that would increase persistence.

Table 28

University Two

College of Agriculture

Major	R	T	S	Graduation Percentages: Original Major	Original College	Transfer to Other Colleges	Entry	Revised
Agr. Economics	30.8	93.1	446	100.0	100.0	100.0	100.0	84.5
Agr. Engr.	28.6	89.2	264	50.0	36.4	0.0	28.6	81.1
Animal Science	52.5	48.8	103	47.6	52.4	64.7	55.0	63.4
General Animal	19.4	16.0	23	0.0	66.3	62.5	65.7	0.0
Ornamental Hort.	80.0	68.6	255	81.7	81.3	50.0	75.0	72.6
Forest Science	51.2	34.4	78	38.1	48.2	57.1	51.2	40.6
Home Economics	54.6	60.2	137	58.5	60.3	61.8	60.8	62.4
Interior Design	60.0	47.1	113	55.6	59.1	75.0	63.3	55.9
College	76.7	35.8	120	48.6	59.7	62.9	60.4	63.9

Table 29

University Two

College of Commerce and Business

Major	R	T	S	Graduation Percentages				
				Original Major	Original College	Transfer to Other Colleges	Entry	Revised
Accounting	70.5	50.3	142	67.9	69.4	61.5	69.1	77.4
Finance	77.8	87.8	637	66.7	72.0	100.0	74.1	82.0
Business Adm.	45.0	56.3	103	53.3	67.3	81.0	69.0	67.6
College	91.2	36.0	143	59.6	69.8	69.8	69.8	75.1

Table 30

University Two

College of Applied Life Studies

Major	R	T	S	Graduation Percentages				
				Original Major	Original College	Transfer to Other Colleges	Entry	Revised
Leisure Studies	76.9	64.3	215	50.0	52.4	40.0	50.0	37.5
Health Educ.	61.5	65.2	177	37.5	37.5	80.0	53.9	52.2
Phys. Educ.	63.0	24.1	83	52.4	54.9	79.3	62.0	57.8
College	71.1	41.6	122	49.5	51.9	75.0	58.6	50.3

Comparisons of University One and University Two

Altough the data for Michigan State University are based upon a cohort of all students enrolled and those for University Two only on new freshmen, there are some interesting points of similarity.

Students who change majors or colleges exhibit a much higher persistence rate than those who remain in the original major.

About 50 percent of the students changed major or college.

Career-oriented programs tend to gain in enrollment by the major and program changes made by students after entry. Persistence rates to a degree are higher for career-oriented programs.

Some majors and programs deviate from the general pattern in holding onto, attracting students, or in degree persistence rate. Investigation of the reasons for this offers one of the most attractive features of this type of analysis.

Chapter Five

Planning the Study of Persistence

In accordance with views expressed in previous chapters, we find the concept of persistence far superior to other terms used in discussion of the extent to which students continue in pursuit of a cherished goal. This concept has the advantage that it places the initiative and responsibility with the individual rather than with the institution. It also raises immediately the issue of the ends toward which that persistence is directed. And implicit in that concern about ends is the matter of benefits. It should not be assumed that the benefits sought by students are entirely self-directed and selfish. In fact, we believe that most individuals seek an education, in part, because of an expectation that it will enable them to do well something that is of benefit to others as well as to themselves. Those self-centered individuals who seek a college degree solely for purposes of personal aggrandizement present higher education with its most serious challenge. Any college would surely despair and shortly become publicly suspect if its computer science graduates became--as a result of their computer sophistication--experts in robbing banks. There may be individuals who persist in degree programs that an educational institution should not retain but neither accurate identification nor easy elimination is feasible.

Persistence in pursuit of a significant educational goal need not be degree directed. Indeed, it may be limited to a few courses or to completion of a set or sequence of courses requiring less or more than the traditional four-year stint required for a baccalaureate. A second challenge to an educational institution is (while extending aid to individuals in their persisting pursuit of a cherished goal) to encourage and assist those individuals to identify longer term goals to which the immediate one is a stepping stone--a meaningful stage of progress rather than a terminal educational experience.

Acceptance by an institution of this second challenge--assisting the individual in goal extension or elaboration--leads to a third challenge. This challenge requires the provision of educational opportunities and programs that build upon prior education and experience rather than ignore it. It requires therefore that degrees, certificates, or other awards be so identified and defined that meaningful stages of progress toward the proficiencies involved can be stated and then identified and recognized in individuals.

In sum, we are suggesting that rather than emphasizing study of student retention as a means of enrollment maintenance or augmentation, study of persistence should be undertaken to acquire a better understanding of the nature of persistence and to seek ways in which (by improving program quality, attractiveness, relevance, and cumulative impact) individuals will tend to a greater extent to identify goals and persist in educational activities directed to their attainment. An educational institution of quality must not only provide the opportunity to experience quality programs but also the opportunity to define personal goals and to choose, modify, or combine programs that are obviously relevant to those personal goals.

Groups or Individuals

The task of dealing with individuals is typically avoided in education just as much as it is elsewhere. The major reasons for this avoidance are found, first, in the difficulty of identifying individual differences and, second, in relating individual characteristics to program requirements and performance standards. Accommodation to individuals frequently involves subjective judgments that require high competency on the part of the judge as well as perhaps excessive time and effort per individual. It is easier and far less expensive to adopt a negative rule such as, for example, one that requires deletion of credits for mathematics or science courses taken more than five years ago or that limits credits transferable from a community or junior college to a maximum of sixty semester hours. Such rules that are regarded as applying to all may appear equitable but they do not permit flexibility in dealing with individuals. Yet persistence is an individual phenomenon and must be dealt with as such.

Even so, it is desirable and even necessary to identify groups of students that share common characteristics that are directly relevant to institutional concerns, program requirements, and individual goals. The most important group of students, from the viewpoint of many colleges and universities, is that commonly characterized as regular or full-time. Indeed, without this group, most educational institutions would not long survive. This group, in turn, is divided into two subgroups: those entering as first-time freshmen (native students) and transfers. In some institutions, as we have earlier noted, the transfer group is small or even nonexistent. In other institutions, transfers may outnumber natives and in a very few "senior" colleges all students are transfers from feeder institutions. Transfers are a diverse group, ranging from those with a few credits to those with credit accumulations equivalent to three years or more of college study. Thus transfers may ultimately be classified as freshmen or as seniors but there are complications. Credits presented by a transfer may be diminished by discarding courses with low grades or courses for which no equivalent exists in the receiving institution. And some credits accepted may not be acceptable for the degree or program selected by the transfer student. Thus transfer students often lose both credit and time in pursuit of their educational goals. Much of this is necessary but some of it is a result of unreasonable rigidity.

The second major group of students--the first being the regular students--is composed of "irregulars" including part-time students, non-degree program students, limited purpose students taking particular courses for pleasure or advancement, guest students including limited purpose students seeking degrees at other institutions and selected high-achieving high school students, and individuals pursuing a second baccalaureate degree. In times past, it has been the practice to ignore these irregular students, much as transfers are still ignored in some institutions, because they are so unusual as to be regarded as irregular. Consistent with our view of persistence and the obligation of an institution to encourage and facilitate, we believe that in the future these "irregular" students should become a group that, although admittedly extremely heterogeneous, deserves the attention of all institutions of higher education. In servicing this group, advisers, counselors, and faculty will realize--as they never quite have heretofore--that policies developed to expedite processing of groups may deter or even defeat individualization.

Structures, Rules, and Procedures

Structures, rules, and procedures constitute a set of specifications imposed upon students in an institution or program for any or all of several reasons. First, they permit the handling of groups of students in ways that appear efficient and convenient to the faculty. Second, they impose requirements upon students that permit the faculty to assert emphatically though possibly erroneously that they insist upon a general or liberal education, the attainment of specific competencies, and the maintenance of high standards for all graduates.

Structures include preprofessional programs established to attract to a liberal arts college students whose present aspirations are pointed to the various professions. The intent is good, but the quality of advising may be dubious in that it is often difficult to find within a liberal arts faculty professors who either know or care about the specific professions and their educational requirements. The large number of students found in some preprofessional programs almost ensures inadequate advising. The requirements imposed in order to assure the student of the relevance of the program to present aspirations may be irrelevant to actual professional school requirements and, at the same time, discourage building of a sound, sequential program leading to the baccauaureate.

To accommodate individuals uncertain about a major, holding units or categories are devised. These may include an initial no-preference choice by the student or a broad divisional selection such as social science or science, with specific choice to be made later.

Some colleges use a general classification for all new entering freshmen and admit them to a specific program or major at some later date. Whether these patterns promote retention and graduation is an issue worthy of study. The answer is probably idiosyncratic to both individuals and institutions. An alternative of allowing a student expression of preference but postponing formal acceptance presents a sufficiently different pattern to be analyzed in relation to degree persistence. For some students and institutions, entry decisions may indeed be premature and conducive to dropout because of the implications involved as well as of the difficulties of change. Early tentative decisions, joined with flexibility in individual programs and in changing programs, would seem to be the most appropriate pattern, depending upon the extent and quality of academic advising and career counseling available. It is difficult to find good advisers and counselors for such individuals. Advisers tend to be oriented to and prefer certain majors, whereas the student's concern lies more in a career decision than in a major choice. Holding and exploratory units help to avoid premature and disastrous choices but, unless supported by sympathetic and knowledgeable advisers and program flexibility, such holding units can be sinkholes. Difficulty in explaining to friends and family the lack of a specific major or program is embarrassing and the lack of evident progress toward a choice vastly discomfiting.

Deferred or junior level admissions to restricted enrollment programs also create holding tanks in which individuals, in effect, compete for a limited number of places. In that competition, the individual is likely to adhere closely to prescribed or recommended courses and avoid both exploration of other interests and election of difficult courses. Yet, as with preprofessional programs, some individuals will be disappointed either by failure to attain admission or by disillusionment after admission. The exploration of alternatives is essential for some individuals if they are to persist.

Rules and procedures, although developed with good intent, often seem to be formulated so as to cause delay and frustration. These details often involve matters that should be routinely handled by advisers such as substitution of an alternative course for one specifically required, or the waiver of a nonessential requirement. The excitement of planning an individualized program is dampened by delay for review by administrators and committees and is destroyed by rejection or insistence upon significant revision. Persistence in a program can be discouraged when only extreme persistence on the part of student and adviser can achieve program variations.

The ability of students in relation to program chosen is another factor. Some students are attracted to science and engineering programs, although they lack the interest, background, and ability to perform well in them. Many dropouts result from this situation. Such students have given would-be interprogram changers a bad reputation on some campuses, with the result that the specific rules, requirements, and general policies governing program changes are unduly restrictive. Moreover, the personnel involved in approving changes may reflect to students--perhaps without intending to do so--an institutional view that changing programs or majors reflects immaturity, inability, or a desire to avoid both demanding intellectual and cultural experiences. Again, the character and quality of academic advising and of personal and career counseling is critical. The orientation must be on the student's welfare rather than on maintaining enrollment in a major or in the college, or on rigidly applying rules and requirements often not fully justified but greatly complicating individual program planning. Program requirement specificity is too frequently a result of acquiescing to multiple faculty or departmental demands for a piece of the action. There is, in many programs, entirely too much emphasis on time serving and on requirements rather than on competency and progress.

No study of persistence is likely to have much effect unless such hindrances are identified in advance and a readiness cultivated for change or flexible adaptation of them. Moreover, unless these hindrances are identified in advance of studying persistence, the study is unlikely to reveal evidence that alteration of rules and policies is desirable.

Bases for Study of Persistence

The approach to the study of persistence depends upon the purposes of the study. If, as was noted earlier, the major interest is in keeping track of the total enrollment, then comparison of gross enrollment from term to term or year to year may suffice. In most cases, however, there would be an interest in breaking down the enrollment from one period to another in reference to student level. What percent of the freshmen return to the second year? What percent of the sophomores return for the third? In this way, one can establish ratios or coefficients indicating the expected return from each level and a composite total indicative of the enrollment to be expected in the subsequent term or year. To this must be added estimates of new students to be admitted and students returning from former quarters or years. This is not really a study of goal persistence; it provides no immediate information which is directly helpful in dealing with enrollment problems. In fact, this crude ratio approach, if incorporated into an enrollment projection model, provides neither assurance of stable enrollment nor a reliable index of possible decrease. The possibility of decrease only signals the need for further study.

As one turns to the formal study of persistence, there are a number of variables to be defined. One is the group of students to be considered: transfers, returning students from prior quarters or years, or native students. This, in turn, leads attention to the time of entry. Institutions on a quarter system may admit a significant number of students each quarter and therefore have some concerns about how these students who are somewhat irregular compare with those who began in the fall quarter. Institutions in which class level is a significant factor in student organization will not only be concerned with persistence over a year within a class, but with persistence in moving from one class to another. Transfer students pose special problems because disparities between the number of credits earned and granted and credits relevant to a particular degree may provide conflicting answers in regard to class status.

Another major question to be resolved is whether the entire focus of the persistence study will be on a degree attainment or whether a number of other educational goals will be considered. If the latter, then considerable effort must be exercised in obtaining from each entering student a declaration of the goal sought and the later recording of any change. Change of major will not necessarily reflect changes in educational goals, in that an individual may plan to attend college for only two years without necessarily being enrolled in a program that is in itself terminal within the two-year period. It is important, as has been pointed out several times, that a decision be made as to whether the study is primarily concerned with the attainment of a particular goal announced by the student or whether the study is attempting to determine the persistence of students to various levels in the program and the factors involved. The latter question involves determination of length of stay and the point in time at which the individual ceased attending.

Another approach focuses on the makeup of graduating classes. In this approach, one determines what subgroups are to be studied, including possibly foreign students, out-of-state students, transfer students, first-time freshmen, male, female, and the like. To obtain meaning from this approach, it is necessary not only to determine the number of students in each group in the graduating class, but also the size of the original groups of which these are residues. In a heterogeneous institution, this retrospective analysis can become a difficult task in that students in any of the subgroups may complete requirements over a span of time rather than in the neatly scheduled sequence upon which degree definitions are based. However, it may be of some importance to determine whether the proportions of various subgroups in the graduating classes over a span of time correspond to the proportions existing in the original entry group. One reason why institutions have found it difficult to attain an increasing proportion of minority students is because the persistence of these various minorities has generally been less than that of the white majority. Direct computation of persistence rates of subgroups is easier and more informative than results acquired by study of graduating classes.

It is also important to clarify in detail just what types of action may be taken as the result of information coming from a persistence study. From the data that we have consulted, we doubt very much that an institution can successfully identify dropout-prone students in advance and significantly increase the persistence rate by special programs designed to retain them. We are quite convinced that attempts to identify discontinuing students close to the point of time of discontinuance with the intent of providing counseling or resolving critical issues leading to withdrawals is also unlikely. Further, we doubt that there will be much increase in persistence on the basis of general measures taken on the basis of group findings. Persistence or discontinuance is a continuum extending from students who are disillusioned or embittered within the first few hours on campus and depart through to those who complete all but one course or attain a 1.99 average when a 2.0 is required for a degree. Every institution knows that among its graduates there are those who are dissatisfied and even bitter about some of their experiences; and there are some among the failures and dropouts that cherish particular aspects of their college experience. Accordingly, we believe that the best way to improve the persistence rate in an institution is to make those changes that enhance the total educational experience of all of the students. Any other approach is not only apt to be ineffective, it is likely to involve allocation of an undue proportion of resources to a group less likely to profit from them than those that stay with the institution. Accordingly, we believe that the only sound basis for study of persistence is to focus simultaneously, on the one hand, on student goals and sense of progress toward them and, on the other hand, to the educational programs provided and the apparent quality and relevance of those programs to what students are seeking.

Factors Involved in Student Persistence

If the approach to persistence emphasizing correspondence between program offerings and student interests and goals is taken, then there are certain types of information that are needed to interpret the data collected in a persistence study. First, perhaps, is an analysis of the interests of students in programs as well as the intrinsic interest of programs. Students coming to an institution may have an interest in careers implied by certain programs offered in the institution, but find that the reality of the experience in these programs is disconcerting because the programs themselves are not intrinsically interesting or relevant to the students' aspirations. This may be a matter of the program characteristics and of the opportunities for employment. Is it made clear by the experiences in the program that it is relevant to a career and that there are opportunities for pursuit of it? And here there may be a disparity between the actuality of career relevance and the opportunity for and the actual communication of that relevance to students by professors who are almost entirely academically oriented and impatient with student career aspirations.

The nature and amount of work required by a program are factors in inducing persistence or change. Some departments and individual professors, in their enthusiasm, heap such an amount of work on students that the students are buried or become dispirited by it. When a significant portion of this unreasonable imposition is clearly time-consuming busy work, transfer, program change, or dropout of students is surely encouraged. Other departments, facing higher enrollments than they can accommodate, institute artifically severe grading practices in a selected basic course and use this device to screen out all but a set number of students. Often, however, the doleful atmosphere induced by such a practice discourages even the successful majors from continuing work in the subject. Departments or professors operating on such a basis are likely to lack majors because of initial avoidance or early change. Departments or professors oriented to research and graduate education frequently--perhaps unintentionally--discourage all but the very able students by imposing requirements that only the latter can meet.

Another aspect of the student program interest relates to the details of the program. Professors who have been oriented to an elite group of students and find their greatest rapport with students planning to go on to graduate school may impose requirements both at the degree level and in specific courses that are unrealistic for the students enrolling. Courses provided as service courses to other departments are sometimes planned and taught as though they were majors. Even without actually being difficult, a program may require so much busy work demanding an extensive amount of time in excess of perceived benefits that students change to something less demanding. Rigor is a factor and it is, in some ways, different from difficulty. The mathematics professor or the history professor that demands that students exhibit patterns of thought and a sophistication in dealing with ideas that is demanded of Ph.D. candidates may communicate with one or two exceedingly unusual students but he loses the rest. There is also the matter of time requirements; there are some professors who make it clear to students that many additional hours beyond those scheduled will be required to complete all requirements.

Faculty-student rapport is another critical matter. Obviously, the previous points involve elements that relate to that rapport. Certainly the professor who suspects that every student is trying to get by with the least possible effort and imposes extra work, stringent grading, and rigorous evaluation is likely to destroy both the intrinsic interest of the program itself and the original interests that brought students to it. On the other hand, some teachers may go to the opposite extreme and, in establishing a comradely relationship with students, virtually eliminate all of those professorial powers and talents that might be directed to providing a sound and demanding educational experience.

The size of a program or major may have something to do with persistence of students in it. A department that carries a very heavy load of majors may simply be unable to provide the personal contact and advising that is necessary if the individual student is to cement the relationship with the program and see it as providing steps toward a planned career. Alternately, departments with only a small number of majors may also experience morale problems as a result of these few students having unreasonable demands placed upon them. Yet, on the balance, the intimate contact with faculty, possible with small numbers, may produce a potent experience.

The appraisal of rapport is not satisfactorily accomplished if the evidence is obtained solely from students who have transferred, changed majors, or withdrawn from the institution. As pointed out earlier, students who persist in a program may find many dissatisfactions with it. Hence any persistence study that is to have significant impact must provide evidence of program and major characteristics that transcend the experiences of those who become so disenchanted that they discontinue their education. Program descriptions provided by departments and other degree-granting units can be studied to ascertain their attractiveness. Course requirements, time requirements, grading practices, program size, and specifically, as we have already pointed out, student persistence and the flow of students out of and into particular programs all provide indices of departmental and college performance. If a study of persistence is to be meaningful, such a range of evidence needs to be collected simultaneously with the collection and analysis of persistence data to pinpoint specific issues in specific programs that require a more detailed analysis and possible alteration.

Basic Information Required

In addition to the general information specified in the previous section, there is some basic set of data required for each student. These data will vary with purpose but they surely include the following: identification of student by name, number, and sex. Public institutions may want to identify students as in state or out of state. In some institutions, interests may attach to whether the student lives on the campus, at home in the community, or commutes daily from a distance. Beyond this, the following items are essential: the initial enrollment date, the initial major or program, and the initial intent as to goal and length of stay. It may be difficult to get individuals to declare an intent to stay one or two years, although it is well known that many students come to college with no strong motivation to persist to a degree.

In institutions in which the adviser plays a significant role over a period of time, it may be useful to record the adviser assigned to the student and update this as necessary. The data collection should include also the last educational institution attended by type--that is, high school, community college, four-year college, or other--but not necessarily by name. This information provides some overlapping with the indication of student status: first-time freshman, transfer student, special non-degree, and possibly other.

It is also desirable to record in these basic data the credit status of the various students. For freshmen there may be credits awarded by examination or by advanced placement. For transfer students, the record should show the total number of credits acceptable for some degree program in the institution at the time of initial enrollment. This figure provides the best index of the level of the student transferring into the institution. For analysis, the total credits should be turned into an index of level status by level or semester. This is accomplished by dividing the total credits by 15 and then using the nearest integer plus one. Thus an individual with 0-7 semester credits would be classified as a first-term student; one with 53-67 semester credits would be classified as a fifth term student.

It is desirable that the record of each individual indicate each term enrolled and any changes in major or program made in a term. Thus it becomes possible to determine immediately for any individual the number of changes made and when they were made. The record will also indicate the last term in which the study is made, and it will reveal the last major or program in which the person was enrolled or the degree obtained.

Admissions criteria such as high school rank or test scores can be entered in the record if desired. Almost certainly colleges and majors will vary in the average scores of individuals admitted and this, in turn, may be related to persistence and to program changes. Annotations should be available for individuals who are officially dropped by the institution. But in the sort of study that we are discussing it should not be assumed that these individuals are to be ignored in determining persistence rates for an institution and for programs in it. The interaction between student interest, ability, and persistence is one about which little is known. There are surely some students dropped from colleges because they are in a program inappropriate to their interests or beyond their ability.

Many additional items of information can be added and the study become so complex because of the number of variables in it that results will be long delayed and virtually meaningless when they become available. We see little point in introducing into this data base information on residence, organizational participation, economic status, and other details. Our review of studies already made indicates that most of the psycho-social variables have limited impact and that their implications for individuals can be readily ascertained by anyone working with students whose persistence is uncertain. Again, we are convinced that the primary way to enhance persistence, whether continuous or interrupted, is to be found in improving the academic programs of institutions and assisting students who find an appropriate placement in these programs.

Analysis

In previous chapters, we have indicated the nature of the analysis that we believe will reflect most insight into attractiveness, relevance, and quality of academic programs in relationship to student interests, aspirations, and abilities. In addition to the percentages of students reflecting various patterns of behavior in respect to major choice that graduate, we believe that there are certain indices with respect to the ebb and flow of program choice that may signal the need for more detailed examination of academic program characteristics. Any major or program that attracts large numbers of students at entry and shortly loses most of them to other majors or colleges, presents a problem of some significance. We found such programs among those that we studied. We have discussed a number of reasons that may be involved. The publicity given to the program may be fallacious, attracting students that are shortly disappointed. The standards of performance required may be such that only a limited number of students of high qualifications should be admitted to the program, or alternatively, the standards of the program may be unrealistic and require adjustments to accommodate a larger number of students evidencing a range of ability. The later success of students who change from their entry major to other programs reflects some information about their original choice that may again relate to the information provided or to the actual program requirements and standards.

Intercollege changes in the university deserve particular attention. University organizational structures differ sufficiently that each institution will have to analyze its own data without much reliance on comparative data from other institutions. There is, however, a tendency to set up barriers in changing from one college to another that scarcely exists when students change majors within a particular college. Thus an institution organized with a single college of liberal arts and sciences probably provides much easier change for students moving across the arts, humanities, social sciences, and sciences than is the case when separate colleges are set up for these major divisions of the liberal arts and sciences.

We particularly feel that the group of students retaining their original choice of major require attention in most institutions. Although we have absolutely no data to support the hypothesis, it is our hunch that among the individuals who retain their original choice of program and major but do not succeed in it there is to be found the most significant number of students who might, by appropriate counsel and program change, find a niche in the institution in which they would persist. And consonant with this, we believe also that an analysis of the graduates of the institution in respect to the composition of that group and the changes in that composition from the time of entry will also suggest some types of students and some changes in program that will increase the persistence rate. In particular, we suggest that deferred gratification upon which the usual structure of undergraduate education depends is more readily accepted by individuals from certain social and economic backgrounds than it is by others who enter higher education because of its possibilities--weakened, but still existent--of moving individuals from a lower social economic level to a higher one.

If our hypothesis that, in most institutions, any continuing improvement in student persistence will result from improved programs in relation to relevance and intrinsic interest and to better placement of individuals in programs, then studies of major and program retention and student persistence in majors, programs, and colleges must be made on both long- and short-term bases. What has happened after two years to individuals who, at entry, selected certain majors? Institutions need the long-term picture of degree acquisition or other benefits, but our observations indicate that program units are likely to be affected only by current information that clearly relates to the present faculty and administration.

Chapter Six

Recapitulation and Recommendations

Daigle (1979, p. 58) has well summarized the state of affairs with regard to student attrition and persistence:

> Despite the plethora of empirical studies on student attrition over the past several decades, the data seldom offer unambiguous conclusions for policy decision. Rather, most hypothesized relationships are either weak or nonexistent; intuitive assumptions about causes or solutions are often untested or unproved; and there is relatively little consensus among the most talented analysts of the problem over what should be done.

Student attrition is neither well understood nor is it being significantly decreased by the addressing of the many recommendations that have been made. Again Daigle (1979, p. 57) has well captured the situation in regard to programs introduced to reduce retention:

> Rather than attempting to do everything, a more rational approach is to do a few things well. In an era of constrained resources, this more focused approach requires the political skill and leadership to shift resources, redefine roles and responsibilities, alter existing structures and procedures, and eliminate nonproductive functions. The essence of good retention management is choice, tempered by the realization that a) some attrition is unavoidable and perhaps desirable (for the student); b) the institution has finite resources and cannot begin to address all of the potential needs (social, academic, psychological, career, financial) of students; c) in order to do a few things well, the institution will simply have to stop doing other things. Unless top level management is willing to make such decisions and choices, discussions of retention . . . are likely to continue to turn on the "do anything" mentality of wish lists and platitudes.

The intent of this chapter is to discuss student persistence within the framework sketched by these two Daigle summaries and within a broader set of assumptions and views about higher education. We shall then make such recommendations about encouraging student persistence as we believe are justified by this discussion.

For many institutions, especially the publicly assisted ones in which state funding is very heavily dependent upon student enrollment, the primary concern about student persistence has been with the maintenance of stable enrollment. In such cases, much of the interest attached to retention has focused solely on prediction of enrollment from term to term and year to year. In many of these institutions, student "stopouts," for various reasons and for various periods of time, have become sufficiently common that predictions of returns of individuals not presently enrolled become a part of the prediction process. If enrollment predictions indicate problems ahead, four recourses are possible. One is a program to maintain student continuation. A second focuses on motivation of return by dropouts. A third is an increased effort to recruit additional students, including possibly mature part-time adults. Increase in the latter group adds to overall enrollment on a head count basis, but several part-time students are required to total up to a credit hour full-time student enrollment. Part-time students place as much load on some administrative and student service functions as do full-time students. Addition of these part-time students, too, will further complicate any efforts of an institution to improve the student retention rate to achievement of a degree. A fourth recourse to overcome lower than satisfactory enrollment projections is to lower admission standards. Seldom is a change in standards stated in such crass terms. There is an attempt to phrase what must be regarded primarily as an institutional need into the extension of opportunity to individuals who previously would have been routinely denied admission. Since evidence from all institutions demonstrates that retention or persistence is related to past achievement and ability level, the lowering of admission standards to increase or maintain enrollment negates any attempt on the part of an institution to increase student retention. In attempting to recruit new students, an institution may also turn its attention to attracting transfer students from other colleges. Community colleges furnish the prime opportunity for such recruitment. Since community college faculties and administrators tend to pride themselves on the number of students transferring to a senior institution and acquiring a degree, recruitment efforts of four-year colleges and universities among community college students are viewed largely with approval until it becomes apparent that some recruiters are encouraging students to transfer after a year or less of work at the community college.

Transfer students present special problems with regard to retention and persistence. Hence they are ignored by many institutions studying the retention problem. Indeed, the vast majority of the institutions responding to our survey have dealt solely with retention of the student entering as a first-time freshman in determining a retention rate. Until recently both transfer students and part-time students have largely been ignored in most institutions, even by some that sought to recruit those groups. This omission demonstrates that the conception of retention held today in many colleges and universities is still primarily an institutionally-oriented concern based upon a view that the ideal situation for a college is to recruit able students who progress through a well-laid-out four-year program and complete as an almost intact class the educational programs initiated four years previously. Summer attendance is encouraged only when necessary for an individual to remain with his or her original class. In these circumstances, transfer students are accepted with hesitancy. Because of nonequivalent prior courses, they do not really fit in at the level to which they aspire, and they are not really needed to maintain enrollment.

For less selective institutions with lower retention rates, large numbers of stopouts and the acceptance of large numbers of transfer students threaten the assumed integrity and sequence of a program. Part-time students, because of their special interests, slower progress, and a tendency to reject certain routine undergraduate requirements, are also a threat to the preferred orderliness. Nevertheless, they have come to be tolerated partly as a public service but increasingly as a means of buttressing enrollments. A few faculty and administrators have begun to suspect that the education sought by these persons may be far more significant to them than the standard program specified for undergraduates. Persistence in pursuit of an education and retention by an institution cannot be regarded as equivalent concepts.

American higher education is at a point in time where economically, philosophically, psychologically, and socially the long tradition of a four-year continuous immersion in an undergraduate degree program is subject to serious question. The century-old breakdown of the long-time traditional sequences in the classics, as they have been replaced by increasing attention to the social sciences and the modern humanities, has raised questions as to the continuity, sequence, and integration in the undergraduate program. The range of new knowledge comprehended in the sciences, applied fields, the social sciences, and the arts has introduced such variation and diversity in undergraduate programs that it is no longer clear what a baccalaureate degree means in knowledge, in accomplishment, or in power. The lack of agreement as to the essence of a liberal education in the modern day and the general lack of relevance of much of what has become to be regarded as liberal education to the lives and problems of individuals of the nation and the world cause many students and many sensitive and intelligent educators and citizens to question the isolation of undergraduate education from reality.

A rapidly changing technology and increasingly more complicated national and international problems require individuals who engage in recurrent if not continual self-education or renewal. These factors also raise serious questions about the relevance of traditional conceptions of both undergraduate and graduate education and of the often archaic and irrational requirements imposed on students by the traditional views and the self-serving interests of faculty and institutions. In reviewing the literature and the current efforts of colleges and universities with regard to study and improvement of retention and persistence, the language used, the assumptions made, and the principles or policies promoted reveal an institutional focus, a philosophical commitment to the attainment of a degree as the only significant evidence of education, and an almost complete lack of interest or concern for the personal benefits and career relevance of individual educational experiences. This view must be modified to one which emphasizes the personal and abiding benefits of educational experiences.

Increasing Educational Benefits to the Individual

Insightful individuals have long since learned that those persons, agencies, and institutions that attempt, under a facade of meeting individual interests and needs, to promote their own prosperity and impose their own ideas on others are likely to fail in the long run because of the inconsistencies and contradictions between what they purport to do and what they actually prefer and proffer. The measures taken by a college or university to improve retention without consulting the needs and benefits of prospective students are likely to lean on a number of devices that may indeed increase the length of the stay of a few students but without necessarily providing a quality education for them. Indeed, some of the commonly recommended practices to increase persistence may negate needed efforts within the institution to update and improve the quality of the educational programs offered.

A highly selective institution with tightly imposed limitations on enrollment apparently can achieve a very high level of retention, as evidenced by the reports of 85 percent to 95 percent of those originally enrolling staying to complete a degree. In such institutions, an individual competes for both a place and prestigious degree. In many respects, the reputation of the institution is more significant than the quality of the educational program provided. The individual who achieves a place in such an institution does not lightly surrender it because of the associated social and career advantages. Such an institution can demand that an individual who, for acceptable reasons wishes to stop out, request a leave in good standing with mutual assurance of a specific date of return and an assured space. It is fortunate that we have a few such institutions, but most colleges and universities neither can nor should attempt to emulate that model.

Extensive dropout or stopout imposes both educational and financial problems on an institution. The most immediate educational problem is that low enrollment in the junior and senior years negates the possibility of providing an extensive array of majors and programs unless offered to individuals or small groups at high cost. The attraction of transfers helps the budget but saps program uniqueness and may endanger quality because of heterogeneity. Among other possible corrective measures, heterogeneity requires individual program planning rather than pat solutions for groups. Most institutions can and must consider ways to cope with discontinuous attendance, termination at less than degree level, and acceptance of transfer students. To curb discontinuities, an institution might impose a readmission fee of such proportions as to discourage students from casual withdrawal. The fee could be waived or reduced in the case of planned and necessary discontinuous enrollment. The size of such a fee in order for it to have dramatic effect on withdrawals is unknown and must be weighted against the expectation that a large fee will discourage students from returning to an institution, especially since they may be able to transfer elsewhere with no difficulty and lesser cost.

Numerous institutions have sought, by the introduction of career development programs, to entice students to remain in college while planning a career. Attempts can be made through advising to relate course selection and program to the developing career plans without asking faculty members to modify their courses. There are difficulties with this approach. Faculty advisers may be unsympathetic or actively antagonistic. They are generally not knowledgeable about the relationship of their disciplines and courses to various careers. At the course modification level, one is likely to find many professors thoroughly disinterested in or antagonistic to making such curricular and course changes as would more clearly relate their discipline to other disciplines and to career prospects. In a study of college catalogs a few years ago, the senior author found statements about career prospects made by departments that commonly had no effect on the courses offered or the instruction provided in them. Career development that is separated from the curriculum can readily become an expensive and unsatisfying add-on that has little impact on students because the central college experience is unrelated to future plans. Advising and counseling, including both career development and personal-social concerns, share this deficiency. Student frustration engendered by the uncertainties and irrelevance of an educational experience is not readily resolved by pious program statements or by advice or therapy that cannot affect the actual experiences and requirements in their courses and programs so that they become relevant to the career in mind.

Program change is a possibility for the aimless students, but many colleges and universities still have policies and sufficiently rigid program requirements that program change is discouraged by red tape and by possible loss of credits. Moreover, despite the extensive evidence of career change and the complexities of choosing a career in modern society, there are still many faculty members and administrators who view the student who considers or requests a significant program change as immature or having personal deficiencies that augur ill for success in any college program. Persistence within a major is indeed overvalued.

A more promising way to relate student interest, aspirations, career development, and program is found in those relatively few institutions wherein the individual student, aided by an adviser or counselor, is able to develop a program around his or her particular aspirations and goals. Such flexibility requires elimination, reduction, or waiver of distribution and specific course requirements and a diminution of the importance attached to departmental majors and specifically approved and published programs. More than one able student has become discouraged and a casualty of a system that promises personal development but provides it on (and in) institutional terms. We remarked earlier that retention is a concern of penitentaries as well as of colleges and universities. Clearly, the inmates of penitentaries do not achieve the educational benefits that criminologists have promoted as major goals of retention. Likewise, many students (even of those who acquire a degree) find that they are not attaining either their own goals or those specified by the institution. The college or university, however, tries to hold onto the student, confident that serving the full term will engender benefits not obvious to anyone. On the other hand, parole boards, fully conscious that lengthy stays in prisons encourage recidivism authorize early withdrawal for good behavior and hope that those released will not return.

With encouragement presently given to education for specific purposes and to recurrent or continuing educational experiences, there is good reason to argue that colleges and universities need a complete change of attitude toward discontinuous attendance. Despite all attempts to identify and to establish early contacts with prospective dropouts, the general attitude toward dropouts discourages individuals from revealing an intent to drop out. Indeed, most dropouts simply are non-returnees--they do not return for the next term. Thereby, they avoid processes that might be embarrassing or troublesome for them. Colleges might do better to recognize that the nature of the programs and requirements offered, lacking as they do continuity, sequence, and relevance, not only permits but actually encourages withdrawal to a more attractive, possibly nonacademic,experience. Revision of some academic programs could enhance their retention qualities by increasing the challenge and relevance of the experience. Common sense and substantial evidence indicate that students who find early experiences in a program satisfying and useful are more likely to continue. Even so, it may be that, for many individuals, uncertainties and difficulties will render continuous education over a period of time impossible. It would be much better if such individuals had the opportunity, in those periods when they are enrolled, to take courses with some immediate value to them. They might also be favorably impressed to find that the institution providing the courses desires to maintain contact and offer assistance in continuing education, either on a part-time or full-time basis.

So long as most colleges were dealing with either an elite or a group of people demanding education as a means of upward mobility, deferred gratification and expedient completion of a program offering tangible social recognition were entirely acceptable goals. What is needed in the present day is a very different conception of education as meeting more immediate individual needs. Students need to become aware that they are making progress rather than serving time. Each course and each experience should have tangible values of which the individual is aware. Each experience also should leave open a few doors or windows providing a view to further experiences that might extend and enhance that which has just been completed. Rather than insisting upon four-year degrees or programs of two or more years in length, faculties, with the help of students and insightful adults in a variety of positions, should seek to identify combinations, groups, or sets of courses built around a common theme, related skills, or a set of insights which have clear meaning and value to individual students and enhance immediately their ability to perform a significant task in society. Institutions that take this point of view will have (so we believe) no problem of surviving, although they may become somewhat different institutions than their present faculty or administrative staff aspire to be. The provision of educational benefits to students should be the major concern.

This does not mean that prescribed specific degree programs should be abandoned. The number of students that prefer to enter carefully defined programs providing both expert assurance of soundness and relevance is and will remain large, especially for students entering college directly from high school. However the rigidity of many such programs is unnecessary and inappropriate. Departmental or single discipline majors can be readily expanded by use of minors, by options among courses or groups of courses, by emphasis on subphases of a discipline, or by attention to concepts or issues transcending a discipline into composite (double, triple, or divisional) majors, and interdisciplinary concentrations with specific vocational or professional implications or broader career plans. It is even possible that such flexibility might restore to the faculty and, through them, to the students some conception of and experience in liberal education. However custom-made clothing is expensive and most individuals find that minor alterations (usually without charge) of mass produced clothing quite adequately meet their respective needs. Willingness and perhaps even some insistence upon individual alterations would alleviate student resistance to adapting to programs rather than adapting programs to their goals.

It is both apparent and understandable that the attention of most institutions has been directed to retention only after the loss of students has become a serious problem--especially in relationship to the operating budget. In view of this somewhat confused and self-serving approach to retention, it is not surprising that most of the efforts to increase retention have dealt with peripheral matters rather than with educational quality and relevance, as recognized by students and as interpreted and delivered by the instructional faculty. If one views the college educatonal experience as assisting individuals to define career goals and associated educational needs and helping these individuals to make definite progress toward career goals by attaining specific skills and by completing a program or degree recognized as relevant to a chosen career, then dropout, stopout, and transfer can be appropriately viewed as responses of individuals who have doubts about the benefits of their respective educational experiences or who have found other experiences temporarily or permanently more attractive.

Rather than emphasizing either retention or persistence, more attention should be given to the responsibility of an educational institution to encourage in every student a sense of the worth of education as a means of personal development and progress by contributing to the attainment of important and desirable personal and social goals. Devices that may retain students regardless of educational benefits conferred are then apparently devious and self-serving and hence inappropriate. Likewise, holding power or a high retention rate is not surely an indication of real institutional quality. Individuals, because of institutional prestige, family pressures, traditions, and social and career benefits may compete to enter and then remain in institutions wherein the actual quality and relevance of the educational programs may not accord with widespread perceptions. Hence further study of retention should take into account, especially in multi-college and multi-program institutions, differentials in programs and major retentions and related matters involving facilitation of student program change, program individualization, career relevance of programs, and faculty rapport with and concern for individual students.

Earlier it has been remarked that if, instead of focusing upon completion of requirements and deferring exploration or involvement in the major or program concentration until after completion of general education or distribution requirements, students were encouraged to seek immediate experience with courses directly relevant to their present career and educational goals, both immediate educational benefits and retention might be improved.

This approach would also imply the existence and desirability of competency assessment of the results of informal education, credit by examination, and the inclusion in educational benefits-oriented retention studies of the role and value of such assessments and credits. The distinction between credit courses and non-credit terminal courses is unclear. It is not a factor in most withdrawals, but the attitudes involved are part of a syndrome conducive to withdrawal. Long-term accumulation of courses into a degree also raises questions about the validity of credit recognition for courses taken five, ten, or more years previously. Extending the concept of retention to include achievement of significant planned benefits will further complicate the concept of retention and highlight the distinctions among institutions that make interinstitutional comparisons of retention studies hazardous and perhaps impossible.

Consistent with the preceding statements of obligations and policies related to retaining students, any program that undertakes retention, persistence, or continued regard for the benefits of higher education should probably evaluate its success by review of the programs, departments, and individuals with which students are associated. There are a number of reasons for this. Individuals may be attracted to a program or to a major for a variety of reasons, not all of which may indicate a deep commitment to the specifics of the program or major requirements or a commitment to the career potentials of the program or major as visualized by the faculty involved. When students find a lack of warmth or personal interest on the part of faculty members or advisers and, particularly, a complete rejection of the particular aims of the individual in regard to the program or major, the seeds of discontinuance are planted. The general hesitancy of faculty members, including advisers in a particular area, to suggest or urge that students consider other possibilities and the corresponding hesitancy in many departments and programs to admit or encourage transfer or change of students to their fields leads to a situation in which it is very likely that individuals who find that an initially selected program does not meet their expectations will not find anyone who can assist them in a thoroughgoing evaluation of other possibilities within the institution or a consideration of alternatives in other institutions. Some departments, such as mathematics, have long drawn primarily students that are interested in teaching or in graduate study. Such a department may not readily accommodate individuals who might in this era seek a strong grounding in mathematics while viewing it primarily as an aid to development of interests and career prospects in business, industry, any of several professions, and in government. Efforts directed to improve student persistence must be directed to those units that provide the programs in which students persist--or do not persist.

Specific Recommendations for Increasing Persistence

The reasons students give for discontinuing college are so extensive and so interwoven, meshed, or entangled that the actual reasons for an individual's withdrawal are seldom clear to the individual and are unascertainable to others. When the complex of reasons given by individuals are itemized and accumulated over individuals, certain points do show up with high frequency, but we are misled if we accept a frequency tabulation of reasons as a basis for planning a program for reducing attrition. There are cataclysmic events that disrupt well-laid plans. These can neither be foretold nor their effects avoided. Death, severe illness or injury, financial disaster, disappointment in love, pregnancy, marriage, and divorce are examples of what may be cataclysmic events leading some individuals to withdraw temporarily or permanently from college. Such events may result in individuals withdrawing (or deciding not to return) so quickly that counseling contacts are not possible. These contacts would serve little purpose at the moment but could provide assurance to the individual that a continuing interest exists on the part of the institution and a willingness to negotiate various ways for the person to resume his or her education on a full-time or part-time basis. This emphasis on ultimate reinvolvement in education in extreme exigency may also be suggestive as the best approach for other individuals withdrawing from college. For many of them, the process of attrition is really one of gradual erosion: a replacement of anticipation, interest, and satisfaction by ennui, boredom, or irritation. The senior author recalls one withdrawing student saying (both with emphasis and disgust) in a final interview, "I just don't feel that I'm getting anywhere." One could only agree that he was correct in his appraisal and that withdrawal was probably a wise decision at the moment. It is doubtful that any action at that point would have reversed the situation. In any case, continuance with what to him were barely acceptable grades might have blighted rather than assisted his development.

However there are a number of positive steps that an institution can take that will improve the overall quality of its programs and likely increase persistence thereby. Moreover, by taking a positive approach, those students that do withdraw may retain a better attitude toward both the institution and the worth of higher education. Thus they may be more likely to return at some future date. Some of the basic preconceptions involved in a positive approach are presented and discussed in the following paragraphs. In the main, we believe that these actions should be predicated upon making college a more significant experience for all students rather than simply providing special experiences that apply only to prospective dropouts. Our recommendations are phrased as advice or injunctions related to the study and improvement of student persistence. The first grouping of suggestions might be categorized as bearing upon the recommended attitudinal makeup of the institution vis-a-vis student persistence.

1. Recognize that the acts of dropping out, stopping out, and transferring are just as normal as the continuous pursuit of education and probably more appropriate than continued enrollment for most of the individuals who withdraw. In fact, colleges have been inconsistent on this matter because the college attention is generally focused on dissatisfactions with students rather than on dissatisfactions of students. Students whose grades are below specified standards are dropped from the institution as failures or as making unsatisfactory progress. These students may have difficulty in gaining admission elsewhere or in getting reinstated at some later date in the original institution. Yet many of these students ejected as failures are not much different from students who withdraw voluntarily because of dissatisfaction with their programs or their progress in them. Some of those thus ejected would very

likely have succeeded in other programs or majors that were more appropriate, of lesser difficulty, or possessing a greater measure of student-faculty rapport. The individual who is dissatisfied with personal attainment and progress is surely a more insightful and more mature person than the individual who plods ahead heedlessly whether to a degree or to failure. The consciously dissatisfied individual may be more difficult to retain and serve than the failures. Moreover, if an individual prefers departure to continuing a college education, we must respect that preference. We should refuse to use the terminology of dropout prevention, for the philosophy implied by prevention is not an acceptable one consistent with the purposes of higher education. Moreover, it is not likely to work.

2. Do not assume that all students enter college to acquire a degree. Unlike elementary and secondary education, there are no inescapable pressures for college attendance either prior to or after enrollment. Some students enter college simply because their parents expect it. Others enter college because they want to get away from home. Still others are putting in time until a job can be found, as evidenced by sudden enrollment increases whenever the economy sours and the job market declines. For others, it is a matter of attending college because the closest friends from high school are so doing. Although there are many individuals entering college with cogent reasons and plans, college attendance is often a path of least resistance rather than a well-considered commitment with a definite goal in view.

3. Be cautious about accepting and acting upon the results of surveys of non-persisting students. The social and psychological factors that have been reported in many studies of retention are probably far less important than the studies suggest because they are characteristics imposed on discontinuing students by those who deplore their withdrawal. Withdrawing from college is a

traumatic experience for many individuals, whether because of internal conflicts or external demands. When cogent and generally acceptable reasons are lacking, withdrawing students naturally seek for those excuses that constitute self-justification for that action. Most students are sufficiently sensitive to their own uncertainties that they are not likely to be heavily critical of college officials or teachers unless they can point to some tangible action or experience to base that criticism upon. Lack of challenge in the classroom is certainly part of the problem, but it is a difficult reason to state and clearly explain in an interview or even on a questionnaire survey of reasons for withdrawal. In addition, lack of challenge in the classroom affects many students who persist. Indeed, it may be a major reason why some students with little motivation and/or limited ability persist. They have found a path of little if not least resistance. Thus we believe that a withdrawal survey that lists many items of social and psychological nature assures that these factors will be frequently checked by students simply because they are acceptable, respectable, and non-prejudicial. We do not really know why students withdraw. The best interpretation may well be that those who do withdraw have no compelling reason to remain.

4. Do not label individuals as potential dropouts. Although institutions are naturally sensitive to and concerned about high rates of withdrawal, their attempts to identify prospective students as dropouts are dangerous. This view is based upon the conviction that it is not possible to identify prospective dropouts with any degree of accuracy; that an attempt to do so may involve the development of a perspective or mind set in the individual thus identified that is unfortunate and even conducive to encouraging the very events we wish to prevent. Furthermore, we find no evidence that special measures directed to retain prospective dropouts are effective, and we question the diversion of resources to those for whom they may be least effective (at least insofar as

persistence is concerned) may result in less attractive program features for other students. A resultant lowering of quality in the program may cause withdrawal of students not previously identified. Emphasis on retention is also likely to result in changes that are more conducive to institutional survival than to quality education.

5. Remember that student recruiting and student retention are closely related. Attempts by a college to launch a major program of recruiting in order to counteract low persistence are unlikely to be appreciated by other colleges and universities and they are not likely to be effective, if we may generalize from the examples observed. Recruiting is most effective on a short-term basis by offering extensive financial aid and/or by approaching individuals rejected or ignored by other institutions. This approach is not conducive either to increasing student persistence or to solving budgetary short falls.

6. Avoid setting up special committees or individuals charged with study and reduction of attrition. This approach will waste a great deal of time in discussion and argument and will ultimately produce a report that only repeats what has been said many times before--perhaps in that very institution. In addition, if funds are found to put any recommendations into effect, a program to increase persistence will usually be initiated with no attempt made to evaluate its effectiveness. One should take the point of view that the institution recognizes that not all students coming to a college will seek a college degree, that many of those that do will transfer to other institutions, and that, for many of the latter, the completion of a program or the acquiring of a degree will be a discontinuous, long-time activity rather than one embraced within a specific span of time on a full-time basis. This does not mean that the matter should not be studied, as later points indicate.

7. Certainly a review and evaluation of campus living, student services,

and student activities is pertinent to a comprehensive effort to improve student persistence. However, there is a tendency to assign too much weight to such ancillary influences. It is clearly possible that an active student retention program may interfere with rather than promote educational progress because of the time involved and the values promoted. Residence hall activities, sports, clubs, special interest groups, and the like can become sideshows that detract students' attention from the main event--acquiring an education. Likewise, these sideshows may attract faculty and administrative attention from the real issues of student retention. Enhanced potential for a satisfying and useful career must remain the central goal of a college education.

The next set of recommendations consists of those that might be referred to the admissions office for review and initiating action if deemed necessary.

1. The orientation program provided for new students (freshmen and transfers) should be reviewed. The character of orientation programs is too frequently determined more by the desire of various administrators and student leaders to appear before new students than by providing a set of experiences and materials carefully predicated upon providing for immediate concerns of students and making apparent to them how further information and assistance is available when needed. Orientation lectures or courses may be a complete bore and create indifference or set a tone of domination and control rather than displaying a concern for assisting individuals.

2. Recognizing that intermittent or discontinuous attendance may become a common pattern, every effort should be made to ease the entry, reentry, and program change procedures. Terminal interviews for departing students should not be regarded as a means of retaining the student but, rather, to assist the student in considering an array of possibilities for continuing education at

a later time or on some part-time basis. This might include arranging for home study or suggesting institutions in the immediate area of the student's home where courses might be available.

3. If the emphasis is placed upon the individual's progress toward completion of a program, degree, or even some lesser educational goal of the individual, then transfer of credit, recognition of old credits, and credits by appraisal or examination should be practices readily available and regularly used. One of the most significant factors in continuing to complete a program is the amount of time necessary. When transfer credits are disallowed for dubious reasons such as no comparable local course, when changes in program lead to discarding credits considered irrelevant from a previous program, and when courses taken several years previously are not accepted for credit, the emphasis appears to be more on time serving in an institution than on individual progress toward a desired educational goal. In this connection, it may be appropriate to eliminate such level designations as freshman, sophomore, junior, and senior since these reflect a commitment to a four-year period of study and a year in each class level. By implication, they suggest that procedures that would expedite individual progress are inappropriate.

4. If reentry fees are levied to discourage purposeless discontinuity in enrollment, attention should be given to reasonable adjustments or waivers for those for whom recurrent rather than continuous enrollment is purposeful or necessary.

5. Set up procedures for continuous compilations of data on student persistence by programs and majors:

(a) In the process, take note of courses and of instructors for which the number of students withdrawing from a class is usually large. Seek the reasons for this in instruction, course content, grading, unrealistic requirements, or poor advising or counseling.

(b) Review grading practices and grading distributions to determine whether the number of marginal and failing grades in certain courses is possibly excessive. Require a rationale for grading practices in all departments and courses.

6. Determine points of student irritation and dissatisfaction with rules, with treatment by individuals, and particularly with any procedures that treat students as numbers rather than persons.

7. Undertake to find out something about students who do not return in a second semester or in a following year by phone or letter, placing the emphasis in the contact on an attempt to be helpful to the individual rather than emphasizing the importance of their immediate return to the institution.

It is our feeling that the quality of the student advisement program should be one of the key concerns of administrators seeking to significantly improve their institution's student persistence record.

Flannery (1973; see also Beal and Noel, 1979, pp. 8, 9) defined attrition as "the discrepancy between student expectation and attainment." This is a provocative definition in that it refers directly to the individual student and suggests that attrition is a gradual erosion of the individual's confidence that the educational experiences provided will foster those developments sought by that individual. However, the definition does not allow for the fact that some students have no concrete expectations or adacemic objectives; such students should be provided with academic advising and counseling directed to the formulation of appropriate and realistic expectations incorporating both liberal education outcomes and career plans, whether or not these can be met in the presently attended institution.

Even those who enter with initially definitive goals and expectations may undergo modifications in them and, accordingly, should be provided with opportunities for academic advising and counseling that may lead to program change within the institution, to intermittent or part-time attendance joined with work experience, to transfer to another institution, or to suspension of formal education for a period of time while practical experience is acquired and more definitive plans made.

Through individual academic advising and counseling, students should have opportunities to select those

- courses, experiences, and instructors providing educational experiences that have immediate relevance to their educational needs and aspirations--that is, that offer the opportunity to develop useful and desirable perceptions, skills, and abilities;
- educational programs offered by faculty members who view their disciplines and courses as means to promote communication skills, personal motivations, value sensitivity and commitments, and intellectual abilities in their students;
- courses and experiences in them that reflect the commitments of professors to facilitate student development;
- educational experiences, rules, regulations, and requirements that reflect an institutional commitment that individual development is more important than rigid enforcement of institutional models and policies;
- educational programs characterized by excellent advising, availability of career information and assistance, and flexibility in planning that gives students the opportunity to shape their own education (both programs and courses) by incorporating into it experiential learning, off-campus work and study, and recognition of significant accomplishment, however acquired.

Counseling and academic advising should be committed to cultivating individual appreciation of and commitment to education as part of a lifelong career of personal growth and of effective and satisfying participation in a contribution to society. An educational institution with a reputation for so doing is unlikely to lack for students. In support of these statements, we offer the following suggestions:

1. Improve the program of academic advising by education, recognition and reward, and removal from departmental control. Daigle (1979, p. 61) comments that the advising problem easily dominates all discussion of student retention. The presumed importance of the issue is exceeded only by the frustration about it. There is no ready solution for the problem. Faculty members are oriented to departmental majors and degree programs as planned by the faculty and stated in the catalog or other documents. The content and organization of these "canned" programs are often understood only by the faculty members directly involved. It is generally assumed that every student selects one of these approved programs and that advising is largely a matter of providing information about the major and a few suggestions about how to satisfy general education or distribution requirements. The faculty advisers attached to the departments or programs are presumably the only ones with the technical expertise, experience, knowledge, and judgment to advise students. It is inevitable, then, that much of the advising that is conducted in this pattern is oriented to the program or the discipline and is routinely carried on to assure that the student meets all of the requirements and uses electives in such a way as to support the major program. Those faculty advisers who, by interest and experience, are in a position to advise or counsel with students on some broader basis of career and personal development risk criticism and even condemnation by their fellows

and administrators if they do so. The fact is that, even in explicitly career-related fields, such as business, art, music, many of the faculty advisers have very limited insight into the opportunities available to young people in these fields and even less knowledge about the specific responsibilities undertaken at an entry level into them. Most institutions would be better off if they relieved disinterested or inept faculty members of the advising chore and assigned it to individuals interested in such work and fully aware that their services would be evaluated on the basis of the effective academic advising of students. Such individuals would presumably have the time and the obligation to be thoroughly acquainted with the total program of the institution and acquire sufficient information about other programs not offered in the institution so that they could approach the task of career advising in terms of the background, interests, and aspirations of the individual. One of the major problems to be faced by these academic advisers, of course, is that there is insufficient evidence available on course offerings to know exactly what a student would experience in or acquire by taking a particular course.

2. If the preceding recommendation is perceived as being infeasible and an institution wishes to retain its existing advisement system, then, as a minimum, an effort should be made to check on the availability of advisers and counselors and evaluate their performance. This evaluation should include information on how many students seek change in advisers and on the advisee dropout rate for each adviser. Because of small numbers, this may not be revelatory within one year, but a two-year or three-year compilation may indicate points of difficulty. The analysis of the advising process should include a review of the extent to which advisers operate with any degree of autonomy in helping students to plan programs. If advisers are seen as simply enforcers of regulations, the possibility of beneficial impact on students by the advising process is probably limited or voided.

3. If the progress of the individual is considered important, then a continuing contact of each individual with an academic adviser who knows the individual well and has possession of all records on the individual may increase persistence. In the initial contact in an institution, it may even be appropriate for the adviser to have all new advisees in a one-credit course that meets regularly and serves as an experience that attempts to integrate across courses, examine the nature and implications of a liberal education and encourage the students to begin to look at and discuss with others the career implications of the educational program. Not every faculty member will successfully fulfill this role.

4. The career possibilities of each major should be spelled out in some detail accompanied by a list of suggestions of possible combinations of majors or of interdisciplinary concentrations that will aid academic advising and stimulate the student to think about his or her education in relationship to other college activities. (See, for example, the outline of the University of Illinois material in Resource B.) Such statements should open possibilities rather than restrict them. Suggested programs should be regarded by the adviser and by the student as suggestions and models which may be followed in the development of individual programs.

5. The efforts of advisers and placement officers need to be coordinated to the extent that the career expectations created within the student by contacts with an adviser are in reasonable agreement with the realities of the marketplace. All too often advisers are either completely oblivious to the demand for certain skills or view them as they existed years in the past. In some cases, well-informed faculty have deliberately repressed dismal statistics regarding career opportunities so as not to turn away majors. (This has occurred, on a national scale, with regard to many doctoral programs.)

Trends show that most occupational areas undergo very regular cyclic changes from high to low employment demand. Because of the pipeline delay represented by four or more years of college training, it is imperative that advisers keep abreast of current employment trends. An annual meeting of advisers and placement officers would be the easiest way to provide such an updating.

Since the authors feel that curricular matters exert the strongest influence upon student persistence, it is clear that we would anticipate the greatest return from efforts expended in the area of curricular reform. Although our suggestions for this sector are few in number, a discerning reader will immediately see that they would entail a considerable amount of work from a large number of participants over a significant period of time.

1. Examine the nature and impact of programs undertaken by students in their first two years. The sometimes excessive loads of general education or distribution requirements are often meaningless, poorly taught, and essentially irrelevant to students' aspirations. Students with a major in mind may be forced to defer contact with it until meeting the general education and other requirements. Students within a major have little opportunity to explore possible majors and careers and may experience personal doubts because of the comments and questions of fellow students and faculty members about career plans. Students without majors or with majors having no evident career implications may be unable to provide, even for themselves, an acceptable reason for attending college. A planned exploration of alternatives would help to resolve this but, as it is, college requirements in the first two years tend to emphasize time serving and discourage or postpone career planning. In their efforts to emphasize a liberal education devoid of vocationalism, institutions actively encourage the discouragement on the part of many students.

2. Review course offerings to determine the extent of course repetition from term to term. Reasonable repetition provides the student with enough scheduling flexibility to sample cognate areas or to construct programs tailored to their particular interests. Certainly such advantages need to be balanced against increased operating costs and the possibility that increased scheduling flexibility may contribute to irregular attendance and a higher incidence of incompletes.

3. Review the requirements of the institution and each program in it and consider whether the requirements imposed are discouraging to students because of the irrelevance, difficulty, or superficial nature of the course. Such a review, however, must be conducted in full knowledge that the other extreme--too few prerequisites--poses an equal danger in that the lack of prerequisites and sequences destroys any sense of progress by encouraging instructors to teach each course as a discrete entity unrelated to any other aspect of students' experiences. It is worthy of note and of emphasis that this approach to fostering persistence is directed to improving the quality of the educational program for all students. Furthermore, it emphasizes the education of students rather than the course offerings and preferences of the faculty. Consideration should also be given to class size and instructional practices, for, in some cases, required freshman and sophomore courses have such large enrollments that student individuality is lost and just at the moment in time when the student is beginning to assert that individuality and needs help in the process.

4. Examine teaching practices, course organization, and program requirements to assess their rationale and impact. The emphasis on using sideshows to improve retention results in ignoring the need for changes in teaching practice, course organization, and program definition. The traditional hesitation about promoting career development that is fostered by a liberal arts

orientation prevents the departments and program heads from developing and making apparent the relationships between particular programs and career opportunities. The faculty and administration of most colleges clearly prefer students who gratefully accept whatever the college offers. Thus students possessing many of the characteristics that are found in dropouts may be turned off by their experiences and ignored by the faculty in favor of the more docile student who does everything required without asking about its immediate significance or ultimate importance. The inquiring student mind is not always a congenial presence even in a college.

Summary: A Service Conception of Education

Critics of American higher education have frequently deplored the extent to which colleges and universities have become cafeterias, department stores, or comprehensive shopping centers. In reviewing such criticisms, one is hard put at times to determine just what the critic has in mind. No doubt some individuals go through a cafeteria line and end up with an inadequate and a more expensive meal than might be served with appropriate esthetic components in a good restaurant or a college dining hall. Whether a particular critic is more concerned with quality, cost, balanced diet, or the lack of esthetic qualities in the academic counterparts of dishes, silverware, and meal service is not easily discerned. The traditional association of values, particularly of esthetic nature, with liberal arts and liberal education sometimes suggests a greater concern with high culture than with the achievement of personal development appropriate to a democratic and technological society. Some critics who use the department store or shopping center characterization are deploring the range and career orientation of programs offered as evidence of the loss of quality in undergraduate education. Yet one only has to view and admit the disciplinary specializations of faculties to recognize that the liberally educated person is more notable by absence than presence in many college and university faculties and that the tremendous advance in knowledge and its applications has rendered any conception of liberal education as an experience with the liberal arts completely meaningless. The ideal of our society is not a person of leisure who has both time and money to enjoy all of the finer things of life but rather it is an individual who is able to earn his or her way and contributes significantly to society while attaining personal satisfaction for himself or herself and his or her immediate associates in so doing. The significance of esthetics and other value considerations is increased by relating them to living rather than by dealing with them as abstractions that are somehow soiled by considering their utility.

The advertising of educational programs through catalogs, brochures, and college nights is, in some respects, more a matter of concern than the programs actually offered. Some advertising of programs partakes of the bait and switch practice, a dishonest procedure used to attract customers with the intent of selling them something other than they sought. Colleges in their advertising frequently imply to prospective students the opportunity to study specific courses or programs providing vocational competence, but they often fail to point out that students may spend the first year or two meeting a variety of requirements that have little relationship to the career program publicized. The virtues and values of a liberal education are not well presented and surely cannot be attained through congeries of requirements and courses that emphasize content, frequently covering detailed and largely useless (because of lack of immediate relevance) knowledge. In contrast with the reasonable student expectation that the college program will immediately involve experiences relevant to personal aspirations, the student is thrown into a group of courses unrelated to each other or to any aspiration that brings the student to college. The product delivered to the student is not the product which he or she thought the institution was selling or that he or she intended to buy. And when the students complain that their educational experiences meet neither their expectations nor their needs, the faculty response tends to be either that such students don't know what is good for them or that they are unable to assimilate it. In many institutions, this reflects the fact that a sizable segment of the faculty is not in tune with either the institution's stated mission and program or the students' expectation that education be relevant to personal goals and career aspirations and plans. It is not surprising under these circumstances that many attempts to improve retention focus on providing a sufficiently entertaining environment in order that the faculty-developed programs, like a pill with its bitter taste disguised by a sugar coating, will be ingested while the students' attention is elsewhere. Attempts to attract and retain students in undergraduate education may be criticized by some traditional or disciplinary-oriented professors as a service conception of education. This is surely correct, but much of undergraduate education is organized to serve the needs of the institution and its faculty rather than the educational needs of its students and society.

We believe that the mystery and the promise long associated with acquiring a prepackaged baccalaureate degree will no longer suffice to entice individuals to enter and remain in college for an extended period of time. Courses, programs, and teaching in them must be reshaped so that, whether an individual takes one course or sixty courses, some clear benefits are apparent. Consistent with this emphasis on individual benefits, we assert that retention or persistence should, to a much greater extent than at present, be regarded as the overt way in which students express themselves in regard to the relevance and merits of the educational programs of an institution.

Resource A.

Paul L. Dressel
Michigan State University
February 15, 1980

Questions About Retention Studies

1. How frequently are studies of undergraduate retention to receipt of a degree made?

2. Who is responsible for making and reporting such studies?

3. How is retention defined?

4. What procedures are used in accumulating the data?

5. How and by whom has the data been used?

6. Can you point to specific program changes that have been made to improve retention?

7. Is there any interest currently in reviewing the retention rate problem and attempting to improve? If so, please identify the individuals or groups involved.

8. Please offer any suggestions or propose any questions that occur to you.

Please send me copies of studies, reports, or documents which provide insights into the questions raised above.

Resource B.

The University of Illinois Handbook

The Office of Admissions and Records at the University of Illinois,Urbana-Champaign campus, under the direction of Dr. Jane Loeb, has prepared a handbook of facts to aid individuals applying for admission to the university (1978). This handbook includes general information about the university and community, advising, orientation, financial aids, housing, activities, and organizations. Of particular relevance are certain sections providing information on assistance available to students and on characteristics of academic programs that may be useful in student choice.

The section on specialized services lists centers and clinics for career development, speech writing and hearing improvement, counseling, and rehabilitation. Special academic programs available include opportunities for planning individual plans of study, a general curriculum serving as the initial year or two for several career programs, and opportunities for independent study and honors.The material on academic programs includes a list of specific majors or programs grouped into eight fields as shown in Table 16. As indicated in this table, the successive columns provide information on the percent that graduate in ten or more semesters and the percent changing majors. Additional information is given by student ability and performance level, employment, types of jobs, and salary.

The information on program changes indicates the program area or group to which students most commonly change and the degree attainment rate for those who change.

Tables 17 and 18 show, for freshmen and transfers respectively, the percent of students receiving degrees within four years and the percentages for students dropped because of unsatisfactory scholarship, for students who withdrew, and for those still enrolled.

Table 16

Group	Percent Academic Ineligible 1st Year	Percent Graduating After 10 Semesters	Percent Changing Majors
1. Health, Physical Education, Recreation, and Aviation	5	53	38
2. Elementary Education, Home Economics, Fine and Applied Arts	2	62	64
3. Languages, Speech, Hearing	3	76	26
4. Communications, Classics, Social Science, English	3	60	29
5. General Agriculture, Horticulture, Landscape Architecture	6	62	42
6. Restaurant Management, Business, Economics	4	63	21
7. Agricultural Mechanics, Teaching of Mathematical Science, and Earth Science	3	62	47
8. Engineering, Chemistry, Mathematics, Physics, Agronomy, Agricultural Science, Architecture	8	65	47

Tables 17 and 18

Disposition of Students After Eight Semesters

University of Illinois, Champaign-Urbana

A. Freshmen

	1968	1969	1970	1971	1972
Degrees	60.74	62.67	61.93	61.87	60.75
No longer enrolled	36.38	34.87	34.79	35.12	36.09
Dropped	16.95	13.98	13.10	13.93	15.71
Discontinued	19.43	20.89	21.69	21.19	20.38
Still enrolled	2.88	2.46	3.29	3.01	3.17
Clear	2.46	2.10	2.86	2.59	2.63
Probation	.42	.36	.43	.42	.54
	100.00	100.00	100.00	100.00	100.00

B. Transfers

	1968	1969	1970	1971	1972
Degrees	61.79	61.34	69.01	68.45	56.40*
No longer enrolled	34.84	36.04	29.65	30.16	35.70
Dropped	12.56	11.75	8.68	7.94	9.47
Discontinued	22.28	24.39	20.97	22.12	26.23
Still enrolled	3.37	2.62	1.35	1.39	7.89
Clear	3.14	2.20	1.14	1.29	6.69
Probation	.23	.42	.21	.10	1.20
	100.00	100.00	100.00	100.00	100.00

*Would increase by 5 to 8 percent if data for 8th year were added

The effect of supplying this data to students and advisers is not known. Nevertheless, its availability is surely desirable in focusing attention on student persistence or withdrawal. It is of interest to note the close correspondence of the year-to-year data supplied in this table. Generally, the degree attainment rate for both freshmen and transfers was in the low 60s but with an indication of an increasing degree persistence for transfers. Students still enrolled at the time this data was collected probably raised the degree persistence rates by another two to three percent. Over a longer span of years, further returns could push the rate close to 70 percent as the transfer figures already suggested in 1970 and 1971.

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